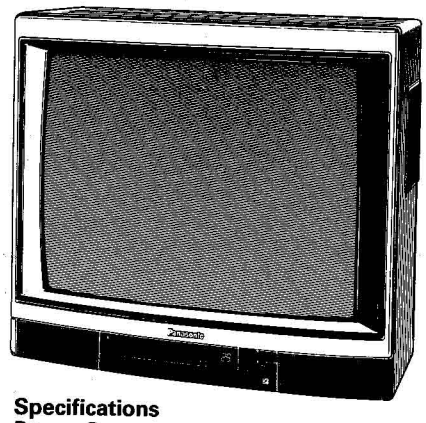
ORDER NO. MLK88011

Service Manual

Colour Television

TX-C84DRS

ALPHA-2 Chassis



Specifications

Power Source:	220 V AC, 50 Hz
Power Consumption:	135 W (Max.)
Aerial Impedance:	75 Ω unbalanced, Coaxial Type
Receiving System:	PAL - B, G SECAM - B, G
Receiving Channels:	VHF E2 ~ E12 UHF E21 ~ E69 CATV S1 ~ S20
Intermediate Frequency:	
	Video 38.9 MHz Sound 33.4 MHz Colour 34.47 MHz (PAL) 34.5 MHz (SECAM) 34.65 MHz (SECAM)
Video/Audio Terminals:	
AV1/21 pin IN	Video 1 Vp-p 75 Ω Audio 0.67 Vrms, 10k Ω
AV1/21 pin OUT	Video 1 Vp-p 75 Ω Audio 0.67 Vrms (100% modulation) 1k Ω
AV2 S-VHS IN	Luminance 1 Vp-p 75 Ω Chrominance 0.3 Vp-p 75 Ω
AV2, AV3 IN	Video 1 Vp-p 75 Ω Audio 0.67 Vrms, 10k Ω
AV2 OUT	Video 1 Vp-p 75 Ω Audio 0.67 Vrms (100% modulation) 1k Ω
Monitor OUT	Video 1 Vp-p 75 Ω Audio 0.67 Vrms (100% modulation) 1k Ω
High Voltage:	25.2 kV at zero beam current
Picture Tube:	24 inches (63 cm) measured diagonally, 110° deflection
Audio Output:	
Internal Speaker	2 × 10 W (Music Power) 8 Ω Impedance
External Speaker	2 × 20 W (Music Power) 4 Ω Impedance
Headphones:	I: 8 Ω Impedance II: 8 Ω Impedance
Speaker:	Woofer 12 cm, 8 Ω Round Type Mid Range 9 × 5 cm 8 Ω Oval Type
Accessories supplied:	Remote Controller UM4 Battery
Dimensions:	Height: 549 mm Width: 594 mm Depth: 448.5 mm
Net Weight:	32 kg

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

Technische Daten

Netzspannung:	220 V AC, 50 Hz
Leistungsaufnahme:	135 W (Max.)
Antennenimpedanz:	75 Ω asymmetrisch, Koaxial-Typ
Empfangssystem:	PAL - B, G SECAM - B, G
Empfangsbereiche:	VHF E2 ~ E12 UHF E21 ~ E69 CATV S1 ~ S20
Zwischenfrequenz:	Bild 38,9 MHz Ton 33,4 MHz Farbe 34,47 MHz (PAL) 34,5 MHz (SECAM) 34,65 MHz (SECAM)
Video/Audio Anschlüsse:	
AV1/21-poliger Eingang	Video 1 Vs-s 75 Ω Audio 0.67 Vrms, 10k Ω
AV1/21 pin-poliger Ausgang	Video 1 Vs-s 75 Ω Audio 0.67 Vrms (100% modulation) 1k Ω
AV2 S-VHS Eingang	Leuchtdichte 1 Vp-p 75 Ω Chrominanz 0.3 Vp-p 75 Ω
AV2, AV3 Eingang	Video 1 Vs-s 75 Ω Audio 0.67 Vrms, 10k Ω
AV2 Ausgang	Video 1 Vs-s 75 Ω Audio 0.67 Vrms (100% modulation) 1k Ω
Monitor-Ausgang	Video 1 Vs-s 75 Ω Audio 0.67 Vrms (100% modulation) 1k Ω
Hochspannung:	25,2 kV bei Nullstrahlstrom
Bildröhre:	63 cm Diagonale, 110° Ablenkung
Ton Ausgangsleistung:	
Einbaulautsprecher	2 × 10 W (Musikleistung) 8 Ω Impedanz
Zusatz-Lautsprecherboxen	2 × 20 W (Musikleistung) 4 Ω Impedanz
Kopfhörer:	I: 8 Ω Impedanz II: 8 Ω Impedanz
Lautsprecher:	12 cm, 8 Ω Rund type 9 × 5 cm, 8 Ω
Mitgeliefertes Zubehör:	Fernbedienung UM4 Batterien
Abmessungen:	Höhe 549 mm Breite 594 mm Tiefe 448.5 mm
Gewicht:	32 kg (netto)

Änderungen der technischen Daten vorbehalten.
Gewichte und Abmessungen sind Näherungsangaben.

Panasonic

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SAFETY PRECAUTIONS

GENERAL GUIDE LINES

1. It is advisable to insert an isolation transformer in the AC supply before servicing a hot chassis.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shields and isolation R-C combinations, are properly installed.
4. When the receiver is not to be used for a long period of time, unplug the power cord from the AC outlet.
5. Potential, as high as 25.2 kV, is present when this receiver is in operation. Operation of the receiver without the rear cover involves the danger of a shock hazard from the receiver power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the receiver chassis before handling the tube.
6. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Turn on the receiver's power switch.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, aerials, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 4MΩ and 20MΩ. When the exposed metal does not have a return path to the chassis, the reading must be ∞.

SICHERHEITS-VORKEHRUNGEN

ALLGEMEINE RICHTLINIEN

1. Es ist empfehlenswert, einen Trenntransformator in die Stromversorgung zu schalten, bevor Reparaturen an einem Gerät vorgenommen werden, dessen Chassis unter Spannung steht.
2. Bei der Durchführung von Servicearbeiten dürfen die ursprünglichen Kabelanschlüsse nicht vertauscht werden, dies gilt insbesondere für die Anschlüsse im Hochspannungsteil. Hat sich ein Kurzschluß ereignet, dann sind alle Teile, an denen Spuren von Überhitzung sichtbar sind, auszuwechseln.
3. Nach Beenden der Servicearbeiten ist sicherzustellen, daß alle Sicherheitsvorrichtungen, wie Isolationsstege, Isolationspapiere, Abschirmungen und Isolations - R-C - Glieder wieder richtig eingesetzt sind.
4. Wenn der Fernseher während längerer Zeit nicht in Betrieb gesetzt wird, sollte der Netzstecker aus der Netzsteckdose gezogen werden.
5. Spannungen von bis zu 25,2 kV sind vorhanden, wenn dieser Fernseher in Betrieb ist. Die Inbetriebnahme des Fernsehers ohne aufgesetzte Rückwand bringt die Gefahr eines elektrischen Schlages von der Fernseher - Stromversorgung mit sich. Servicearbeiten sollten daher auch nie durch Personen versucht werden, die nicht in vollem Umfang mit den Sicherheitsvorkehrungen beim Umgang mit Hochspannungsgeräten vertraut sind. Vor der Handhabung mit der Bildröhre ist die Anode der Bildröhre immer an dem Empfängerchassis zu entladen.
6. Nach Beenden der Servicearbeiten sind die folgenden Kriechstrom-Prüfungen durchzuführen, um den Kunden vor der Gefahr eines elektrischen Schlages zu schützen.

MESSUNG DES ISOLATIONSWIDERSTANDES IM ABGESCHALTETEN ZUSTAND

1. Den Netzstecker aus der Netzsteckdose ziehen und die beiden Steckerstifte kurzschließen.
2. Den Geräteschalter des Fernsehgerätes einschalten.
3. Mit einem Ohmmeter den Widerstandswert zwischen dem überbrückten Netzkabelstecker und jedem zugänglichen Metallteil am Gehäuse des Fernsehgerätes, wie Schraubenköpfe, Antennen, Achsen der Regler, Griffassungen usw.messen. Wenn ein zugängliches Metallteil eine Rückleitung zum Chassis hat, sollte die Anzeige zwischen 4MΩ und 20MΩ betragen. Wenn ein zugängliches Metallteil keine Rückleitung zum Chassis hat, muß die Anzeige ∞ betragen.

LEAKAGE CURRENT HOT CHECK (See Fig. 1)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 2 kΩ, 10W resistor, in series with an exposed metallic part on the receiver and an earth such as water pipe.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 1.4 volts RMS. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

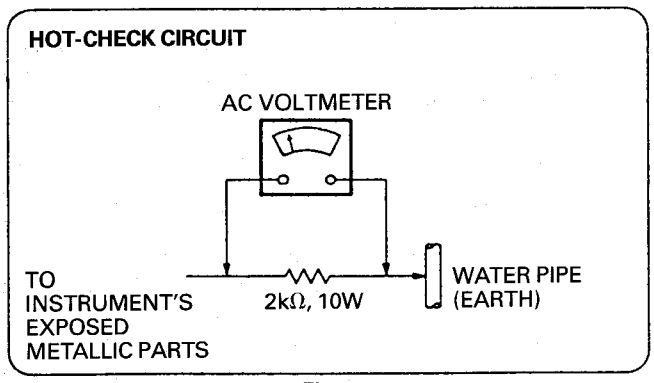


Fig. 1

X-RADIATION

WARNING:

1. The potential sources of X-Radiation in TV sets are the High Voltage section and the picture tube.
2. When using a picture tube test jig for service, ensure that jig is capable of handling 25.2 kV without causing X-Radiation.

NOTE: It is important to use an accurate periodically calibrated high voltage meter.

1. Set the brightness to minimum.
2. Set the service switch to the SERVICE position.
3. Measure the High Voltage. The meter reading should indicate 25.2 kV, ± 1.5 kV. If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent an X-Radiation possibility, it is essential to use the specified tube.

MESSUNG DES KRIECHSTROMS IM EINGESCHALTETEN ZUSTAND (Siehe Abb. 1)

1. Den Netzstecker direkt in eine Netzsteckdose stecken. Für diese Messung keinen Trenntransformator verwenden.
2. Einen 2 kΩ/10 W - Widerstand in Serie mit einem von außen zugänglichen Metallteil am Fernsehgerät und einer guten, Erdung z.B. Wasserleitung, anschließen.
3. Ein Wechselstrom-Voltmeter mit einmen Meßbereich von 1000 Ohm/Volt oder größer verwenden, um die Spannung über den Widerstand zu messen.
4. Jedes zugänglich Metallteil prüten, und an jedem Punkt die Spannung messen.
5. Den Netzstecker umgekehrt in die Steckdose stecken und jede der obigen Messungen wiederholen.
6. Die Spannung darf an keinem der Punkte 1,4V eff. überschreiten. Wird dieser Wert nicht eingehalten, besteht die Gefahr eines elektrischen Schlages, und das Fernsehgerät sollte daher repariert und nachgeprüft werden, bevor es an den Kunden zurückgegeben wird.

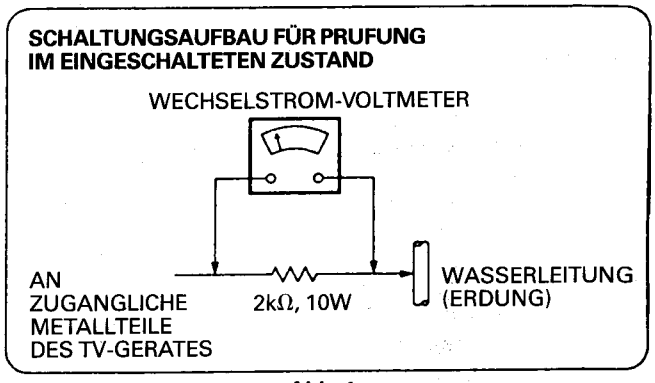


Abb. 1

RÖNTGENSTRAHLUNG

ACHTUNG:

1. Potentielle Quellen von Roentgenstrahlung in Fernsehgeräten sind das Hochspannungsteil und die Bildröhre.
2. Bei Verwendung eines Bildröhren-Prüfgerätes für den Service ist sicherzustellen, daß es für die Belastung von 25,2 kV geeignet ist, ohne daß eine Röntgenstrahlung verursacht wird.

ANMERKUNG: Es ist wichtig, daß ein präzises, regelmäßig geprüftes Voltmeter verwendet wird.

1. Helligkeit auf Minimum stellen.
2. Den Service-Schalter in die "SERVICE"-Position stellen.
3. Die Hochspannung messen. Die Anzeige des Instrumentes sollite 25,2 kV ±1,5 betragen. Falls die Anzeige diese Toleranzgrenzen überschreitet, ist sofortige die Behebung nötig, um die Möglichkeit vorzeitigen Komponentenausfalls zu verhüten.
4. Um die Möglichkeit von Röntgenstrahlung zu begrenzen, ist es wichtig, daß nur die vorgeschriebene Bildröhre verwendet wird.

SHUT DOWN CIRCUIT TEST

This test must be made as a final check before the set is returned to the customer.

1. With the rear cover removed, supply nominal 220V AC to the set, turn on the power switch.
2. Receive a Phillips pattern.
3. Supply - 40 V DC to TPE7, and confirm that the shut down circuit does not operate.
4. Supply - 60 V DC to TPE7, and confirm that the shut down circuit operates.

TEST KURZSCHLUSS-SICHERHEITSSCHALTUNG

Dieser Test muß als letzte Prüfung vor der Rückgabe des Gerätes an den Kunden durchgeührt werden.

1. Bei abgenommener Rückwand ist dem Gerät 220V Nennspannung zuzuführen, und der Geräteschalter einzuschalten.
2. Ein Phillips-Muster empfangen.
3. Gleichspannung von - 40 V an TPE7 einspeisen und sicherstellen, daß die Kurzschluß-Sicherheitsschaltung nicht anspricht.
4. Gleichspannung von - 60 V an TPE7 einspeisen und sich vergewissern, daß die Kurzschluß-Sicherheitsschaltung jetzt anspricht.

LOCATION OF CONTROLS

KONTROLLANLAGE

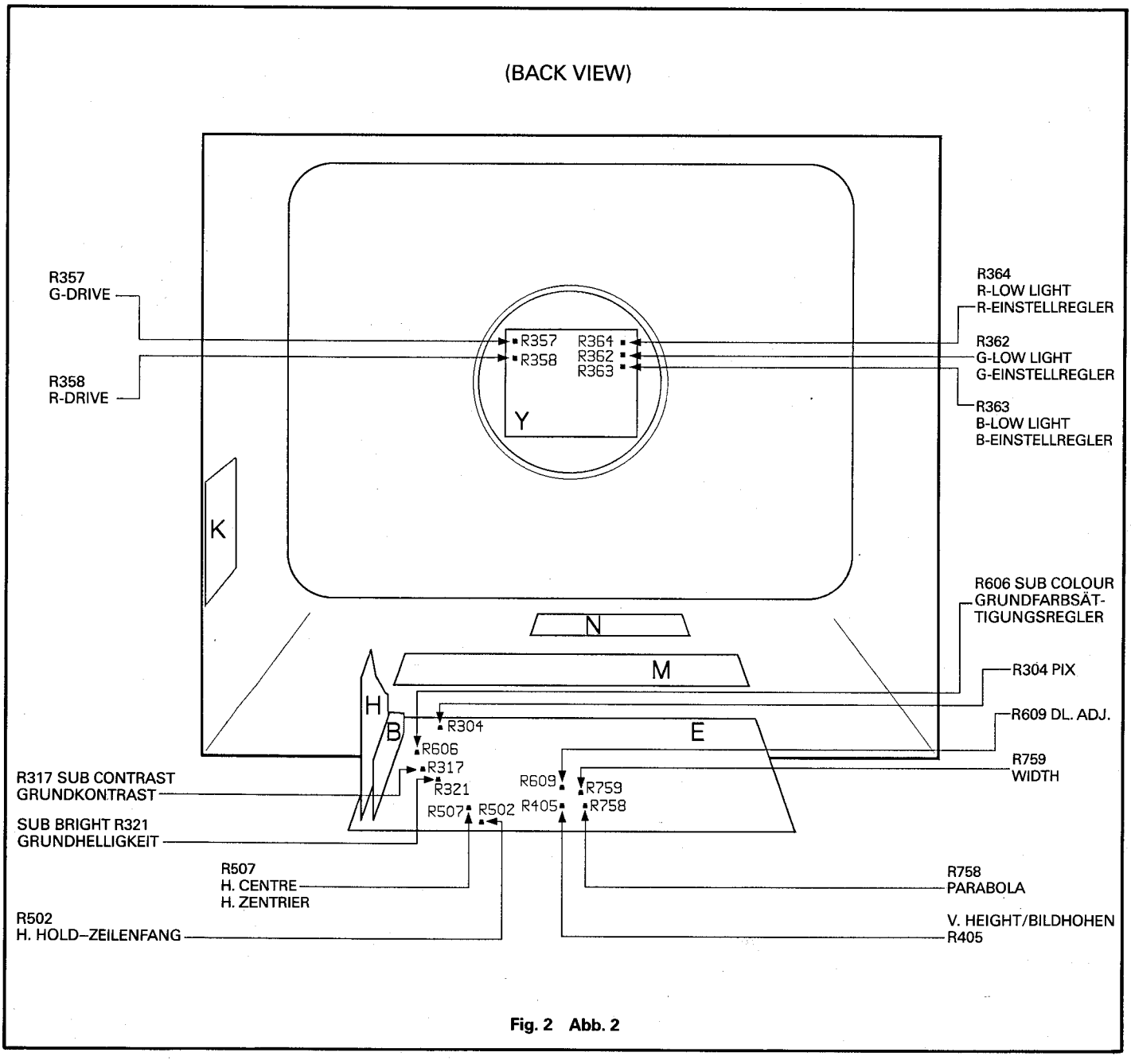


Fig. 2 Abb. 2

SERVICE HINTS

WARTUNGSHINWEISE

HOW TO MOVE CHASSIS INTO SERVICE POSITION

CHASSIS IN SERVICE-POSITION BRINGEN

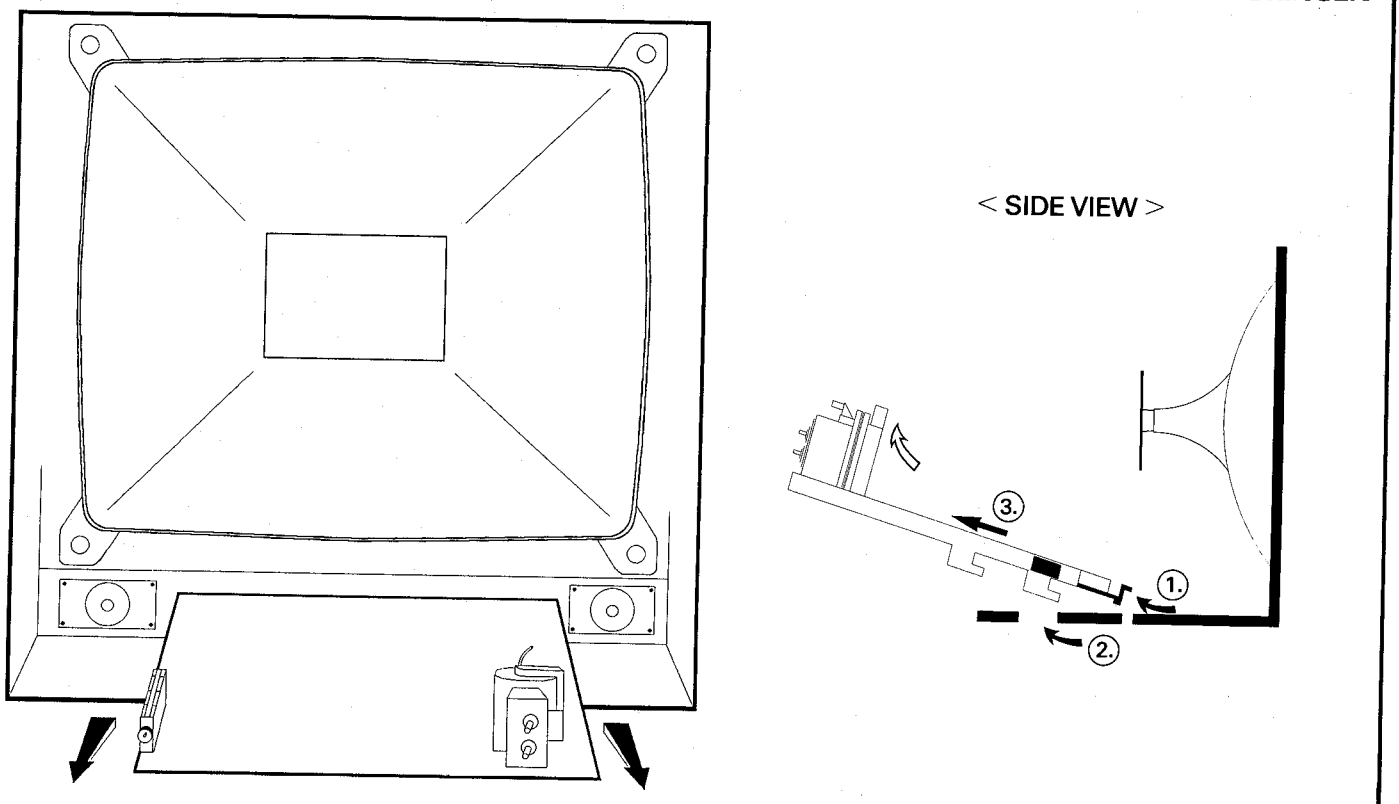


Fig. 3 Abb. 3

1. Locate tabs at far end of chassis, as indicated in Fig. 3, hold and lift tabs then pull out slightly.
2. Support chassis at front, slide out and lift up.

1. Die beiden Halteklammern am Chassisende unterhalb der Bildröhre anheben und Chassis nach hinten ziehen (Abb. 3).
2. Chassis aus den Führungen im Gehäuseboden herausheben.

HOW TO MOVE CONTROL BLOCK INTO SERVICE POSITION

1. Move chassis into service position.
2. Remove the five screws (A) as shown in fig. 4.
3. Slide the control block gently out and place into the position shown in fig. 4.

BEDIENTEIL IN SERVICE-POSITION BRINGEN

1. Chassis in Service-Position bringen.
2. 5 Schrauben (A) entfernen (Abb. 4).
3. Bedienteil vorsichtig herausziehen unud gem. Abb. 4 (entspr. dem Modell) in Service-Stellung bringen.

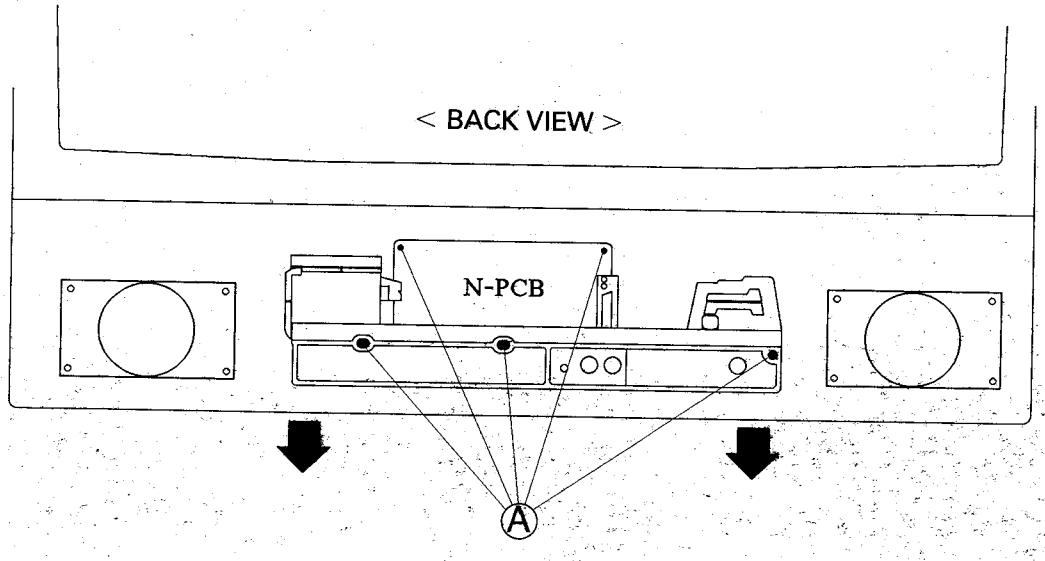


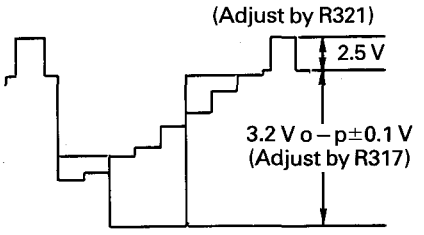
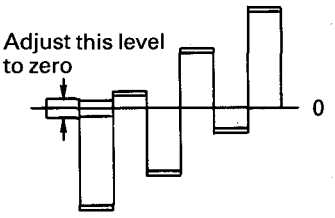
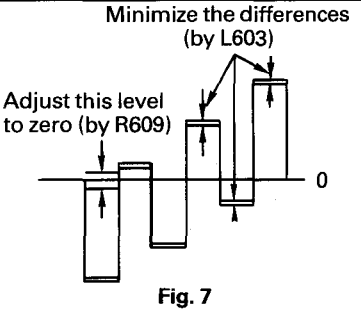
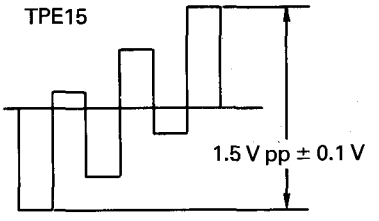
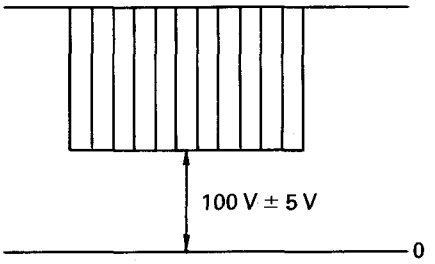
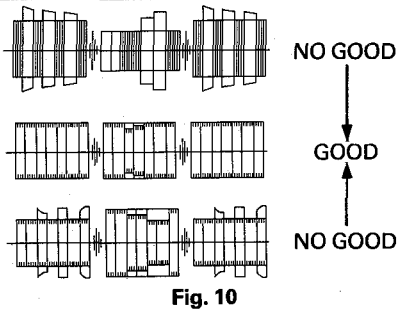
Fig. 4 Abb. 4

ADJUSTMENTS

ITEM/PREPARATION	ADJUSTMENT PROCEDURE
B VOLTAGE 1. Operate the TV set. 2. Set controls: Bright .....minimum Contrast .....minimum Sub-Bright .....minimum	1. Confirm the indicated test points for the specified voltage. TPE1: 155.0 ± 2.0 V TPE5: 12.0 ± 1.0 V TPE2: 5.0 ± 0.5 V TPE34: 25.0 ± 1.5 V TPE3: 32.0 ± 3.0 V TPE66: 8.5 ± 1.0 V TPE4: 16.0 ± 1.5 V TPE10: 205 ± 10.0 V
AFC 1. Operate the TV set. 2. Set a channel in UHF band. 3. Supply 38.9 MHz continuous wave to TP of Tuner. 4. Connect a DVM to TPE22.	1. Adjust L135 so that voltage at TPE22 becomes 5.6 ± 0.1 V. 2. Change the frequency and confirm the voltage as shown below. + 100 kHz: less than 3.5 V − 100 kHz: more than 7.0 V
RF AGC 1. Receive a colour bar pattern. 2. Set the input level to 66 dB ± 2 dB (75Ω open). 3. Connect an oscilloscope to TPE9 with DC mode.	1. Turn RF AGC control (R135) fully clockwise. 2. Slowly turn R135 counterclockwise to set it at the point just before voltage at TPE9 drops.
HIGH VOLTAGE 1. Operate the TV set. 2. Set controls: Bright .....minimum Contrast .....minimum Sub-Bright .....minimum	1. Confirm that the high voltage is within a range of 25.2 kV + 1.5 kV, −1.5 kV. **Note:** If the high voltage is out of tolerance, confirm that voltage at zero beam current (Bright, Contrast and Colour controls to their minimum positions) is within the above tolerance.
TELETEXT CLOCK 1. Operate the TV set and confirm the +B voltage. 2. Connect a frequency counter to TPH4. 3. Earth TPH3.	1. Adjust C3528. Reading of the counter: 6.0 MHz ± 200 Hz.
PILOT CARRIER 1. Receive a signal with stereo sound. 2. Connect an oscilloscope to TPB18.	1. Adjust L2201 and R2209 to maximize the amplitude of sine wave on the oscilloscope. 2. Change the stereo sound into a multiplex sound, and connection of the oscilloscope to TPB17. 3. Adjust L2201 and R2210 to maximise the amplitude of sine wave. **Note:** Adjusted position of L2201 must be at the point where both stereo sound and multiplex sound are maximised.
CHANNEL SEPARATION 1. Receive a stereo signal with 40% modulation at 1kHz for R channel, 0% modulation for L channel. 2. Connect an oscilloscope to TPB7.	1. Adjust R2224 to minimize signal level at TPB7.

JUSTIERUNGEN

ABGLEICHPUNKTE UND VORBEREITUNG	JUSTIERUNG
VERSORGUNGSSPANNUNG B 1. TV einschalten. 2. Die Regler wie folgt einstellen: Helligkeit .....minimum Kontrast .....minimum Grundhelligkeitsregler .....minimum	1. Die Messungen an den Testpunkten sollen folgende Betriebsspannungen ergeben. TPE1: 155.0 ± 2.0 V TPE5: 12.0 ± 1.0 V TPE2: 5.0 ± 0.5 V TPE34: 25.0 ± 1.5 V TPE3: 32.0 ± 3.0 V TPE66: 8.5 ± 1.0 V TPE4: 16.0 ± 1.5 V TPE10: 205 ± 10.0 V
AFC 1. TV einschalten. 2. Kanal im UHF-Bereich wählen. 3. Meßsender auf 38.9 MHz einstellen und an den Tuner-Testpunkt anschließen. 4. DVM an TPE22 anschließen.	1. Spule L135 so abgleichen, daß die Gleichspannung am TPE22 5.6 V ± 0.1 V beträgt. 2. Die Frequenz ändern, und die Spannung wie folgt kontrollieren: + 100 kHz Kleiner als 3.5 V − 100 kHz: Größer als 7.0 V
RF AGC 1. Empfang eines Farbbalken - Testbildes. 2. Das Eingangssignal soll mit 66 dB ± 2 dB (75Ω eingespeist werden). 3. Oszilloskop an TPE9 in DC-Funktion anklemmen.	1. Der Regler RF AGC (R135) ist auf Rechtsanschlag zu stellen. 2. Den Regler R135 so einstellen, daß er kurz vor dem Punkt steht, an dem der Messwert an TPE9 absinkt.
HOCHSPANNUNG 1. TV einschalten. 2. Die Regler wie folgt einstellen: Helligkeit .....minimum Kontrast .....minimum Grundhelligkeitsregler .minimum	1. Die Hochspannung darf bei 25.2 kV eine Toleranz von + 1.5 kV und − 1.5 kV haben. **Anmerkung:** Falls die Hochspannung außerhalb der Toleranz liegt, bitte bei minimaler Helligkeit, Kontrast und Farbsättigung prüfen, ob sie innerhalb der Toleranz ist.
VIDEOTEXT-CLOCK-OSZILLATOR 1. TV einschalten und Betriebsspannung B prüfen. 2. Frequenzzähler an TPH4 anschließen. 3. TPH3 auf Masse klemmen.	1. C3528 einstellen. Ablesung des Zählers: 6.0 MHz ± 200 Hz.
PILOT TONTRÄGER 1. Stereo - Signal empfangen. 2. Oszilloskop an TPB18.	1. Mit L2201 und R2209 die Sinusamplitude auf Maximum einstellen. 2. Oszilloskop an TPB17 anklemmen und von Stereo auf Multiplex umschalten. 3. L2201 und R2210 auf Maximum der Sinusamplitude justieren. **Anmerkung:** Die Einstellung von L2201 muß sowohl bei Stereo wie auch Multiplex die maximale Sinusamplitude ergeben!
KANALTRENNUNG 1. Stereo - Signal empfangen. Rechten Kanal mit 40% 1kHz modulieren. Linker Kanal ohne Modulation. 2. Oszilloskop an TPB7 anklemmen.	1. R2224 so einstellen daß das Übersprechen vom rechten zum linken Kanal (TPB7) zum Minimum wird.

ITEM/PREPARATION	ADJUSTMENT PROCEDURE	WAVEFORM
SUB CONTRAST 1. Receive a colour bar pattern (SECAM). 2. Connect an oscilloscope to TPE15. 3. Set controls: Bright .....minimum Contrast .....maximum Colour .....minimum Picture .....centre	1. Adjust Sub-Bright (R321) for 2.5 V higher than black level. 2. Connect link between TPE7 and earth. Adjust sub-contrast (R317) for 3.2 V p-p. 3. Remove link from TPE7.	 Fig. 5
PAL APC 1. Receive a PAL colour bar pattern. 2. Earth TPE76. 3. Connect oscilloscope to TPE15.	1. Adjust APC trimmer (C637) to obtain stationary or slowly moving colour bars as Fig. 6. 2. Remove link and confirm colour bars are stationary.	 Fig. 6
PAL DELAY LINE 1. Receive a PAL colour bar pattern. 2. Connect a 100Ω resistor across TPE6 and ground. 3. Connect an oscilloscope to TPE15.	1. Adjust DL Adj. (R609) and DL Matching Trans. (L603) to obtain waveform at TPE15 as shown in Fig. 7.	 Fig. 7
SUB COLOUR 1. Receive a PAL colour bar pattern. 2. Set controls: contrast .....maximum bright .....minimum picture .....centre sub colour .....centre 3. Connect DVM to TPE21. 4. Connect an oscilloscope to TPE15.	1. Adjust colour to achieve 5.3 V at TPE21. 2. Connect a 100Ω resistor between TPE6 and earth. 3. Adjust sub colour (R606). For 1.5 Vpp ± 0.1 V at TPE15 as shown in Fig. 8. 4. Remove 100Ω resistor from TPE6 and earth.	 Fig. 8
TELETEXT CONTRAST **Note:** Before this adjustment is attempted, white balance adjustment must be finished. 1. Receive a teletext signal. 2. Connect an oscilloscope to TPY1. 3. Set controls: bright .....minimum contrast .....maximum	1. Adjust R3514 to obtain the waveform as shown in Fig 9.	 Fig. 9
BELL FILTER/ LINE DISCRIMINATOR 1. Receive a Philips pattern (SECAM). 2. Connect an oscilloscope to TPE69.	1. Adjust L609 to obtain waveform as shown in Fig. 10.	 Fig. 10

ABGLEICHPUNKTE UND VORBEREITUNG	JUSTIERUNG	SIGNALFORM
GRUNDKONTRAST 1. Empfang eines Farbbalken - Testbildes (SECAM). 2. Oszilloskop an Testpunkt TPE15. 3. Die Regler wie folgt einstellen: Helligkeit .....minimum Kontrast .....maximum Farbsättigung .....minimum Bildschärfe .....mittenstellung	1. Grundhelligkeit (R321) auf 2.5 V einstellen. 2. TPE7 mit Masse verbinden. Grundhelligkeit (R317) auf 3.2 Vss einstellen.	(einstellen mit R321) 2.5 V 3.2 V ± 0.1 V (Einstellen mit R317) **Abb. 5**
PAL APC 1. Empfang eines PAL - Farbbalken - Testbildes. 2. TPE76 auf Masse Klemen. 3. Oszilloskop an Testpunkt TPE15.	1. Trimmer C637 auf minimale Bewegung in den Farbbalken abgleichen (siehe Abb. 6). 2. Brücken entfernen und korrekte Farbbalkenfolge überprüfen.	Impuls auf nullinie bringen 0 **Abb. 6**
PAL-VERZÖGERUNGSLEITUNG 1. Empfang eines PAL - Farbbalken - Testbildes. 2. 100 ohm zwischen TPE6 und Masse einlöten. 3. Oszilloskop an Testpunkt TPE15.	1. Einstellungen mit den Reglern DL Adj. (R609) und der Spule DL Matching Trans. (L603) so vornehmen, daß die Signalform, an Testpunkt TPE15 erreicht wird, wie Abb. 7 dargestellt TPE15.	Minimum der differenzen (mit L603) Impuls auf nullinie bringen mit (R609) 0 **Abb. 7**
GRUNDFARBSÄTTIGUNGS-REGLER Grundeinstellung Farbsättigung (SUB CONTRAST) 1. Farbbalkentestbild empfangen. 2. kontrast .....maximum helligkeit .....minimum konturz. (PICTURE) .....mitte R606 (SUB-COLOUR) .....mitte 3. Digitalvoltmeter an TPE21 anschliessen. 4. Oszillograph an TPE15 anschliessen.	1. Farbsättigung an TPE21 auf 5.3 V einstellen. 2. 100Ω zwischen TPE6 und Masse einlöten. 3. An TPE15 mit R606 (SUB-COL.) 1.5 Vss ± 0.1 V einstellen. 4. 100Ω zwischen TPE6 und Masse entfernen.	TPE15 1.5 Vss ± 0.1 V **Abb. 8**
VIDEOTEXT-KONTRAST **Anmerkung:** Vor dieser Einstellung muß die des Weißabgleiches abgeschlossen sein. 1. Videotextsignal empfangen. 2. Oszilloskop an Testpunkt TPY1. 3. Die Regler wie folgt einstellen: helligkeit .....minimum kontrast .....maximum	1. Mit dem R3514 die Signalform nach Abb. 9.	100 V ± 5 V 0 **Abb. 9**
GLOCKENFILTER/ ZEILENDISKRIMINATOR 1. Ein Philips-Muster empfangen (SECAM). 2. Oszilloskop an Testpunkt TPE69.	1. Mit dem L609 die Signalform nach Abb. 10 einstellen.	NO GOOD GOOD NO GOOD **Abb. 10**

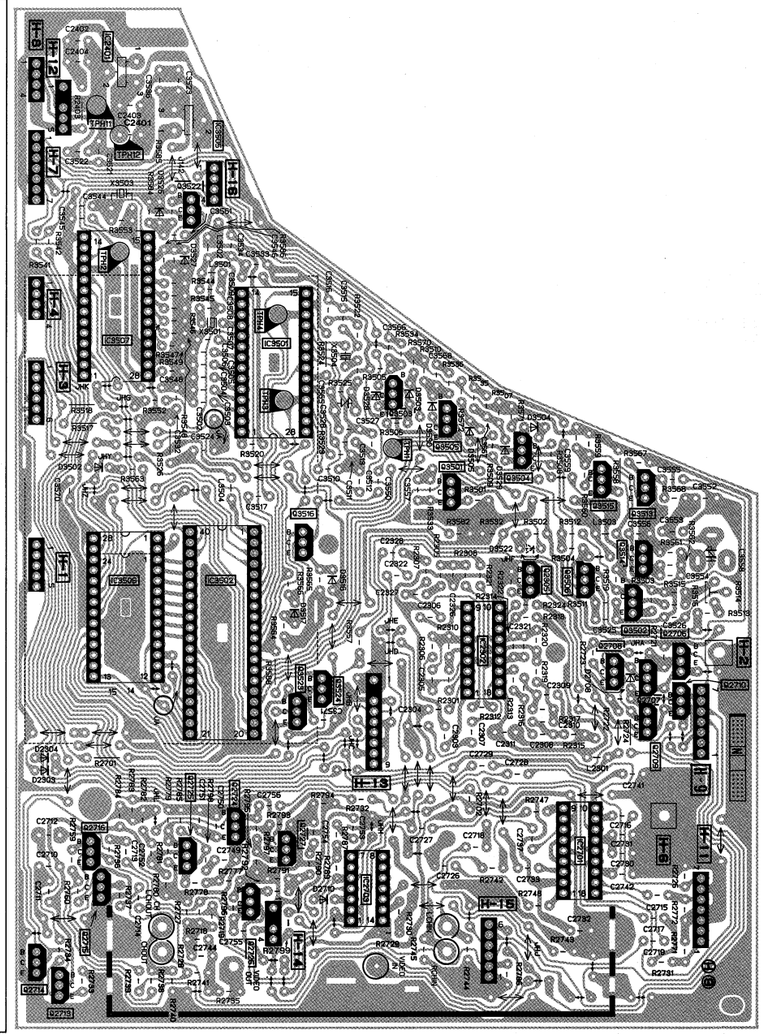
CONDUCTOR VIEWS

ANSICHT DER LEITERBAHNEN

H-BOARD TNP107202AA

PLATINE H TNP107202AA

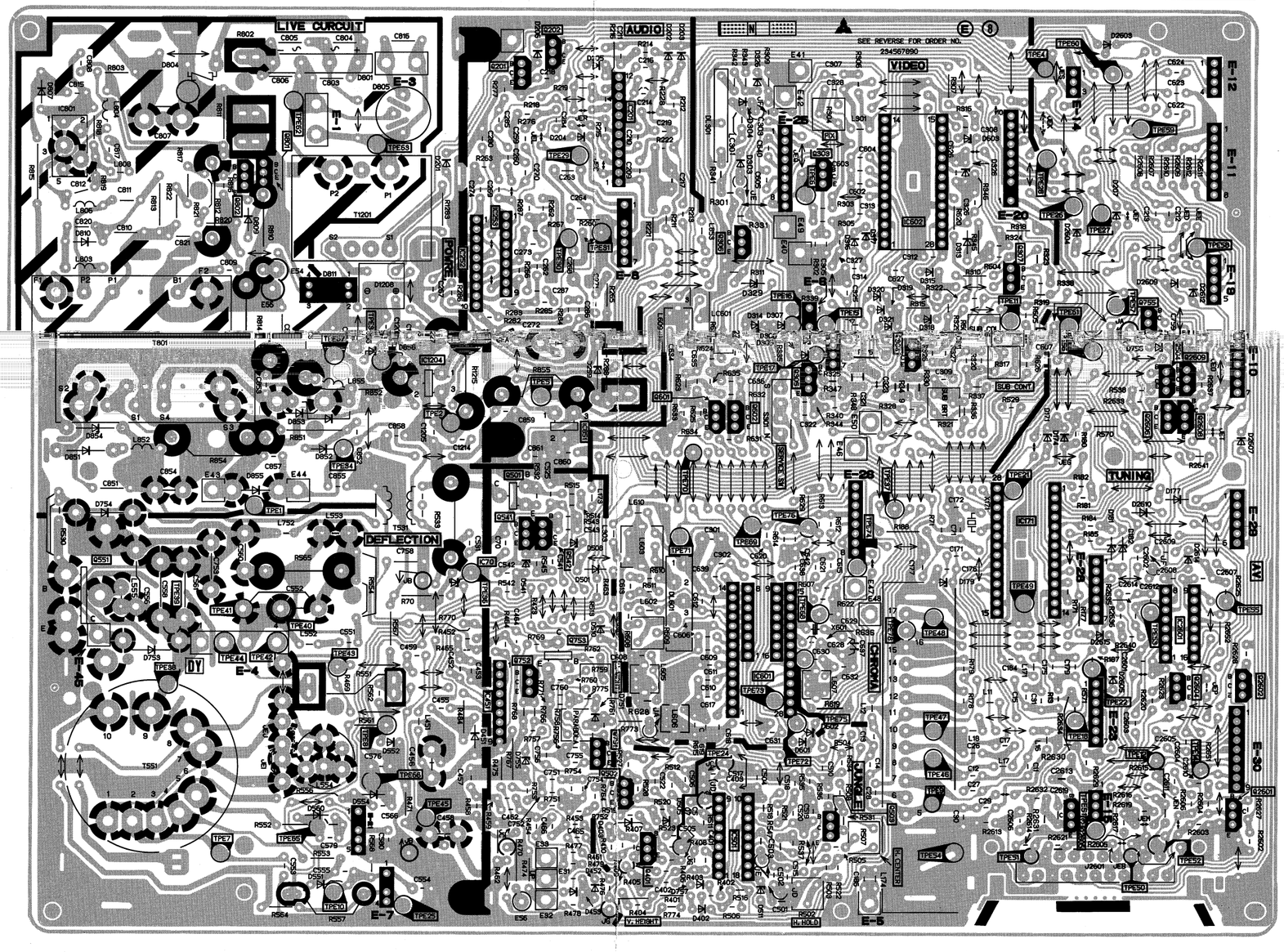
I.C.'s	Transistors	Diodes	Test Points
IC2401			
IC3505			TPH11 TPH12
	Q3522	D3526	
		D3527	TPH2
IC3507 IC3501			TPH4
	Q3503	D3528 D3503 D3504 D3530	TPH3
	Q3505 Q3501 Q3504	D3505 D3502 D3529	TPH1
	Q3515 Q3516 Q3513		
	Q3514	D3522	
IC3506 IC3502	Q2305 Q3506	D3516	
	Q3502 Q2706 Q2708	D3517	
IC2302	Q3523 Q2710		
	Q2707 Q3524	D2708	
	Q2709	D2304	
	Q2725 Q2724	D2303	
	Q2716 Q2727		
IC2701			
IC2703		D2710	
	Q2715 Q2726		
	Q2714		
	Q2713		



E-BOARD TNP197019AG

PLATINE E TNP197019AG

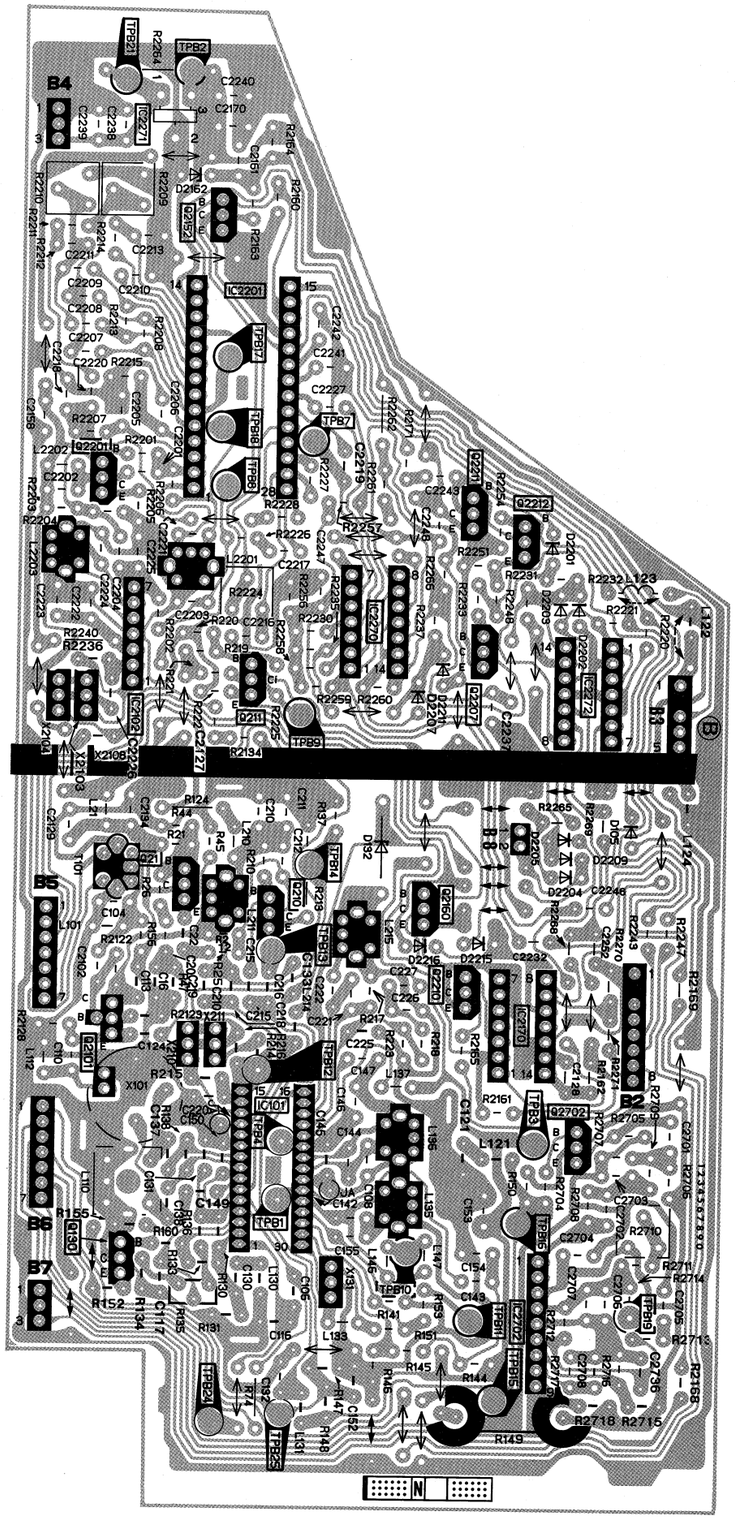
IC	IC801 IC1204 IC252 IC70 IC451 IC253 IC851 IC201 IC501 IC601 IC602 IC171 IC2601
TRANSISTORS	Q551 Q802 Q801 Q541 Q501 Q201 Q752 Q202 Q542 Q753 Q502 Q751 Q401 Q601 Q602 Q306 Q305 Q303 Q503 Q304 Q307 Q2605 Q2606 Q755 Q504 Q2609 Q2608 Q2604 Q2602 Q2601
DIODE	D807 D851 D854 D754 D810 D753 D855 D809 D853 D811 D554 D552 D801 D856 D805 D1208 D852 D560 D551 D201 D451 D755 D541 D206 D204 D501 D259 D510 D453 D452 D508 D403 D205 D757 D505 D402 D202 D203 D306 D305 D511 D304 D303 D329 D314 D326 D307 D601 D602 D316 D317 D320 D321 D319 D318 D315 D179 D313 D603 D328 D171 D174 D604 D2615 D181 D2605 D2603 D207 D2610 D182 D756 D2609 D2614 D2612 D2607
TEST POINT	TPE38 TPE39 TPE41 TPE44 TPE7 TPE65 TPE40 TPE62 TPE1 TPE42 TPE10 TPE43 TPE34 TPE67 TPE8 TPE3 TPE66 TPE45 TPE25 TPE63 TPE2 TPE36 TPE5 TPE29 TPE30 TPE31 TPE71 TPE70 TPE24 TPE69 TPE73 TPE17 TPE76 TPE72 TPE68 TPE16 TPE75 TPE6 TPE15 TPE74 TPE78 TPE37 TPE48 TPE47 TPE46 TPE9 TPE54 TPE21 TPE51 TPE49 TPE11 TPE4 TPE28 TPE26 TPE18 TPE56 TPE51 TPE60 TPE61 TPE22 TPE27 TPE50 TPE12 TPE57 TPE53 TPE59 TPE14 TPE52 TPE58 TPE55

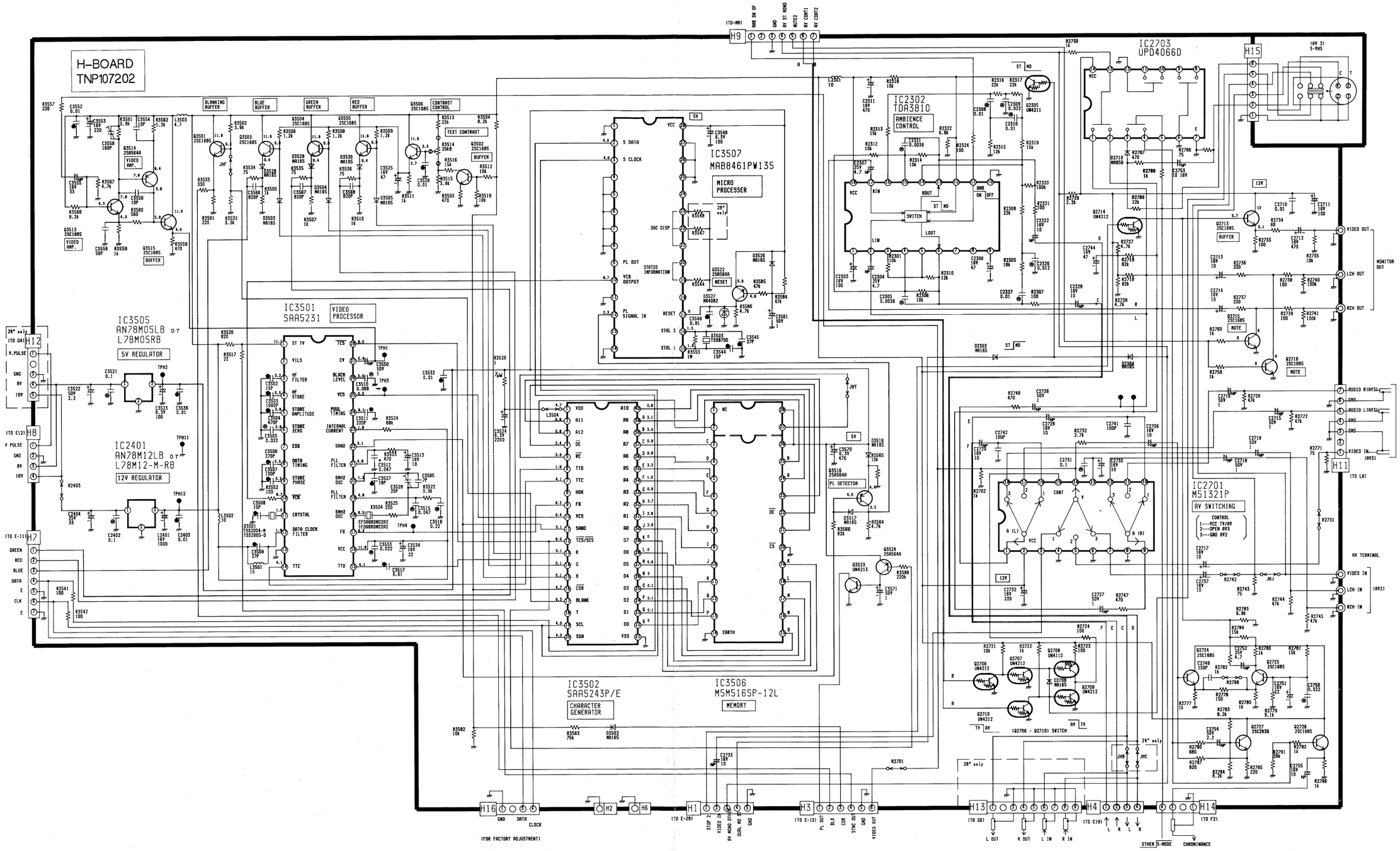


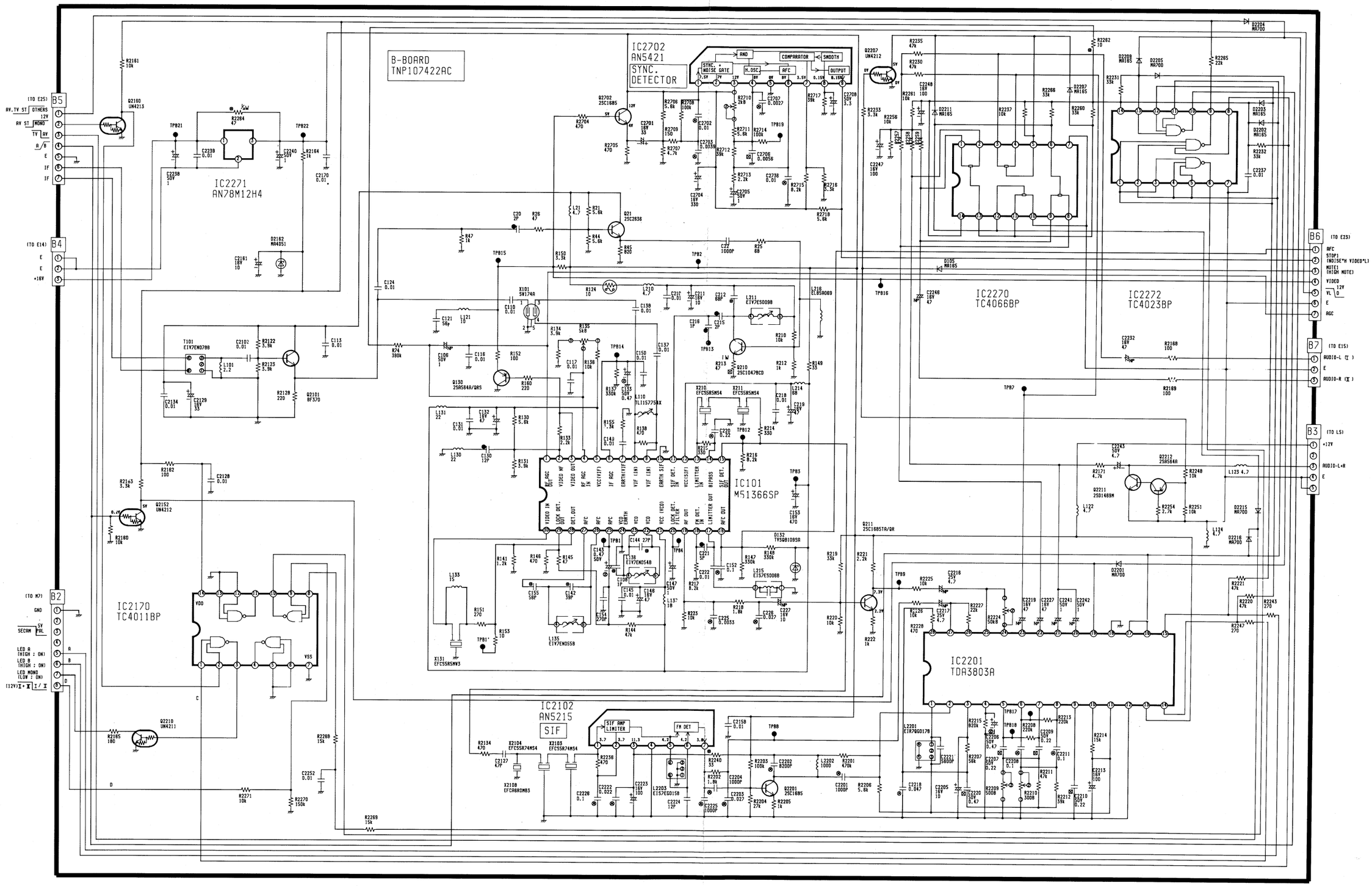
B-BOARD TNP107422AC

PLATINE B TNP107422AC

I.C.'s	Transistors	Diodes	Test Points
			TPB21 TPB2
IC2271			
		D2162	
	Q2152		
IC2201			
			TPB17
			TPB7
	Q2201		TPB18
	Q2211		
	Q2212		TPB8
		D2201	
		D2203	
IC2270			
		D2202	
IC2272	Q2207		
IC2102	Q211	D2207 D2211	TPB9
		D105 D132 D2205 D2209	
	Q21		TPB14
	Q210 Q2160	D2204	
		D2216 D2215	TPB13
	Q2210		
IC2170			
	Q2101		TPB12
IC101	Q2702		TPB3
			TPB4
			TPB1
	Q130		TPB16
			TPB10
			TPB19
IC2702			TPB11
			TPB15
			TPB24
			TPB25


B4
B5
B6
B7
TPB21
TPB2
TPB17
TPB7
TPB18
TPB8
TPB3
TPB4
TPB1
TPB16
TPB10
TPB19
TPB11
TPB15
TPB24
TPB25
TPB14
TPB13
TPB12
TPB9
IC2201
IC2270
IC2272
IC2702
IC101
IC2170
IC2102
Q2201
Q2211
Q2212
Q2207
Q211
Q21
Q2210
Q2160
Q2101
Q2702
Q130
Q2152
D2162
D2201
D2203
D2202
D105
D132
D2205
D2209
D2204
D2216
D2215
D2207
D2211
X2102
X2103
X101
L2201
L123
L124
L121
L122
L101
L110
L203
L2202
L2201
L2203
L2202
L2201
L2203
L2202
L2201
L2


H-BOARD
TNP107202
IC3507
MAB8461PW135
MICRO PROCESSER
IC3501
SAA5231
VIDEO PROCESSOR
IC3505
AN78M05LB or
L78M05RB
5V REGULATOR
IC2401
AN78M12LB or
L78M12-M-RB
12V REGULATOR
IC2302
TDA3810
AMBIENCE CONTROL
IC2703
UPD4066D
IC2701
M51321P
AV SWITCHING
IC3502
SAA5243P/E
CHARACTER GENERATOR
IC3506
M5M516SP-12L
MEMORY
BLANKING BUFFER
BLUE BUFFER
GREEN BUFFER
RED BUFFER
CONTRAST CONTROL
TEXT CONTRAST
VIDEO AMP.
BUFFER
MUTE
PL DETECTOR
(Q2708 - Q2710) SWITCH
MONITOR OUT
AV TERMINAL
(FOR FACTORY ADJUSTMENT)
OTHER S-MODE
CHROMINANCE


B-BOARD
TNP107422AC
IC2702
AN5421
SYNC.
DETECTOR
IC2271
AN78M12H4
IC101
M51366SP
IC2270
TC4066BP
IC2272
TC4023BP
IC2201
TDA3803A
IC2170
TC4011BP
IC2102
AN5215
SIF
SIF AMP
LIMITER
FM DET
B5
B4
B6
B7
B3
B2
(TO E25)
(TO E14)
(TO E23)
(TO E15)
(TO LS)
(TO M7)
AV.TV ST
OTHERS
AV ST
MONO
TV
AV
E
IF
+16V
AFC
MUTE1
(HIGH MUTE)
VIDEO
AGC
AUDIO-L
AUDIO-R
+12V
AUDIO-L+R
GND
SECAM
PAL
LED A
(HIGH : ON)
LED B
(HIGH : ON)
LED MONO
(LOW : ON)
(12V)
Q2180 UN4215
Q2152 UN4212
Q2210 UN4211
Q2101 BF370
Q2702 2SC1685
Q21 2SC2636
Q130 2SR584R/QRS
Q2212 2SB564A
Q2211 2SD1469M
Q2207 UN4212
Q211 2SC1685TA/QR
Q2201 2SC1685
D2182 MA4051
D132 TVSQB109SA
D105 MA165
D2204 MA700
D2209 MA165
D2205 MA700
D2207 MA165
D2211 MA165
D2203 MA165
D2202 MA165
D2215 MA700
D2216 MA700
D2201 MA700
X101 SW174A
X131 EFCS5R8MW5
X2104 EFCS5R74MS4
X2103 EFCS5R24MS4
X2108 EFCA6R0MB5
X210 EFCS5R5MS4
X211 EFCS5R5MS4
T101 EIY7END788
L138 EIY7END540
L215 EIS7ES0088
L110 TLI15775BX
L211 EIY7ES0098
L216 ELS8A069
L2201 EIR7QG017B
L2203 EIS7ES0158
TPB1
TPB2
TPB3
TPB4
TPB5
TPB7
TPB8
TPB9
TPB10
TPB12
TPB13
TPB14
TPB15
TPB16
TPB17
TPB18
TPB19
SYNC. + NOISE GATE
RND
COMPARATOR
SMOOTH
H.OSC
AFC
OUTPUT
VIDEO IN
LOCK DET. OUT
DET.OUT
AFC
AFC
AFC
VCO
VCO
VCC (VCO)
VCC(VIF)
IF AGC
ERATH(VIF)
VIF (IN)
VIF (IN)
ERATH SIF
SIF DET.
SIF OUT
VCC(SIF)
LIMITTER IN
BYPASS
SIF DET.
SIF OUT
VIDEO OUT
VIDEO INF
BF AGC IN
LOCK DET. OUT
AF OUT
AF DET.
LIMITTER OUT
AFC OUT
VDD
VSS
SIF AMP LIMITER
FM DET

M-BOARD
TNP107228

IC1101
UPC1474HA
REMOTE CONTROL PREAMP.

IC1203
MAB8461PW
MICRO

IC1202
PCD8582
MEMORY

IC1001
M50460-049P
MICROCOMPUTER

IC1205
SAA1061
LED DRIVER

16 BIT LATCH AND OUTPUT

INPUT AND BUS RECEIVER

D1251
LN81RPHL

D1253
LN524GA-(L)

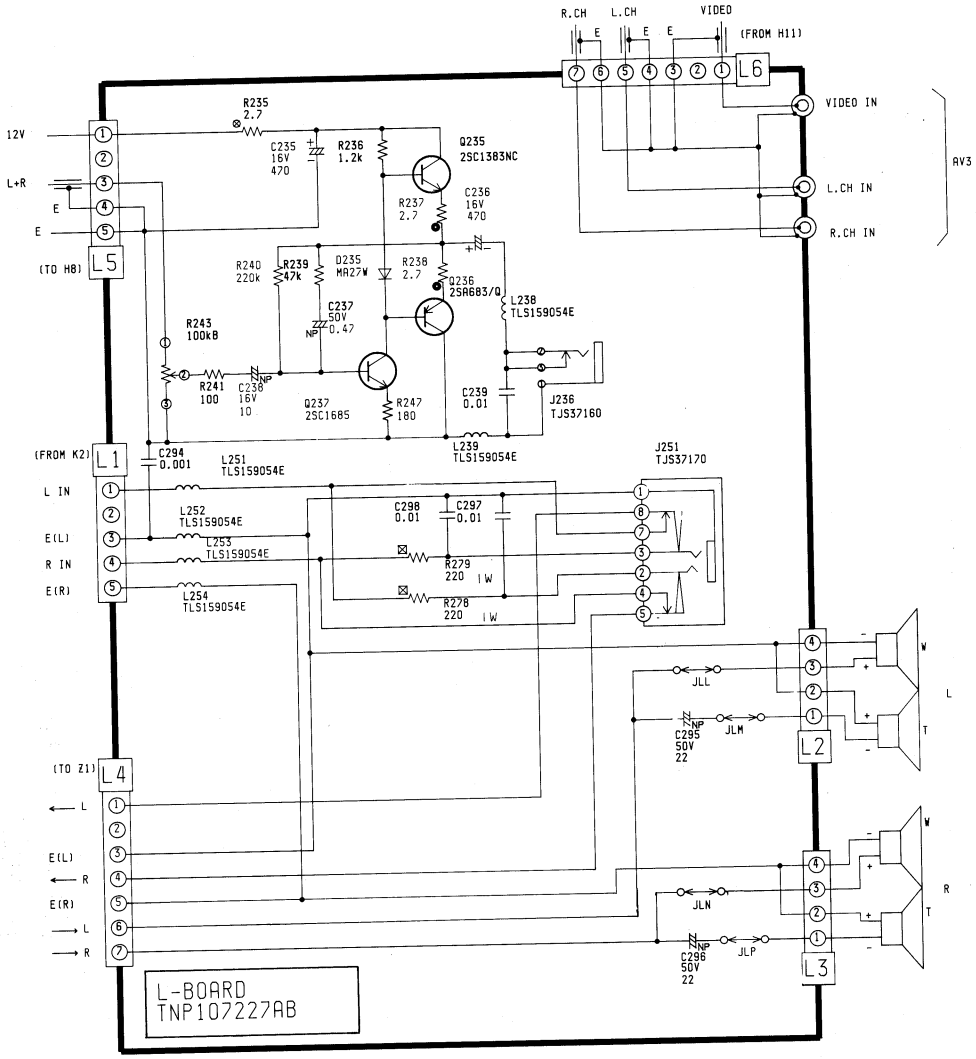
D1255
LN053219P2

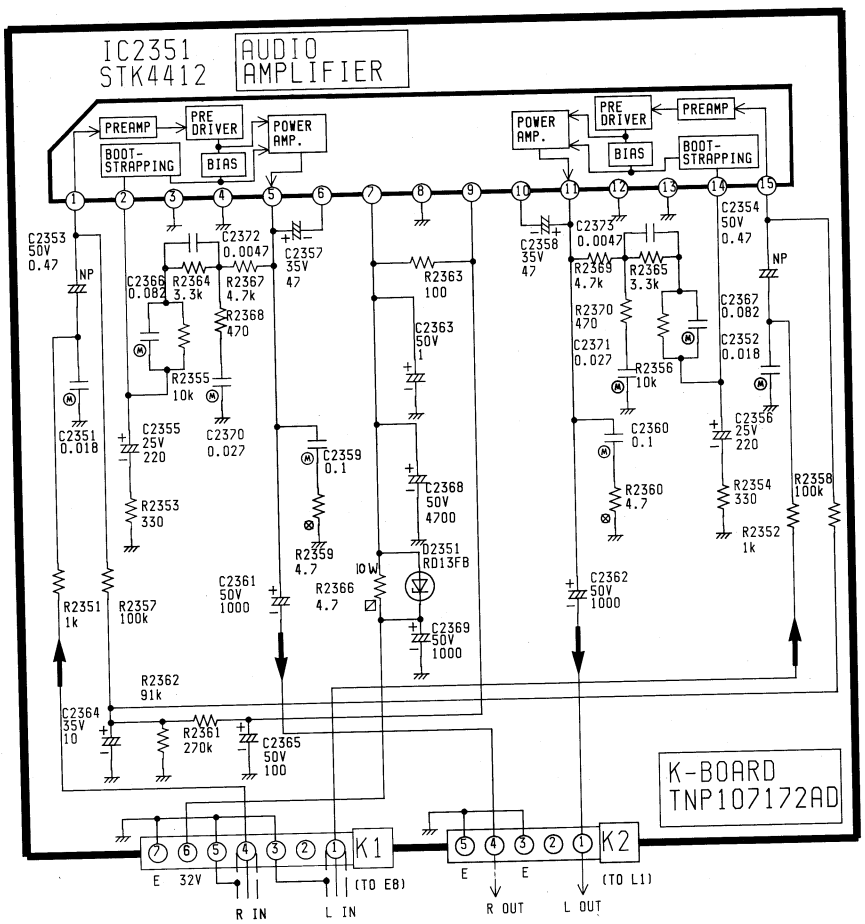
N-BOARD
TNP107226AG

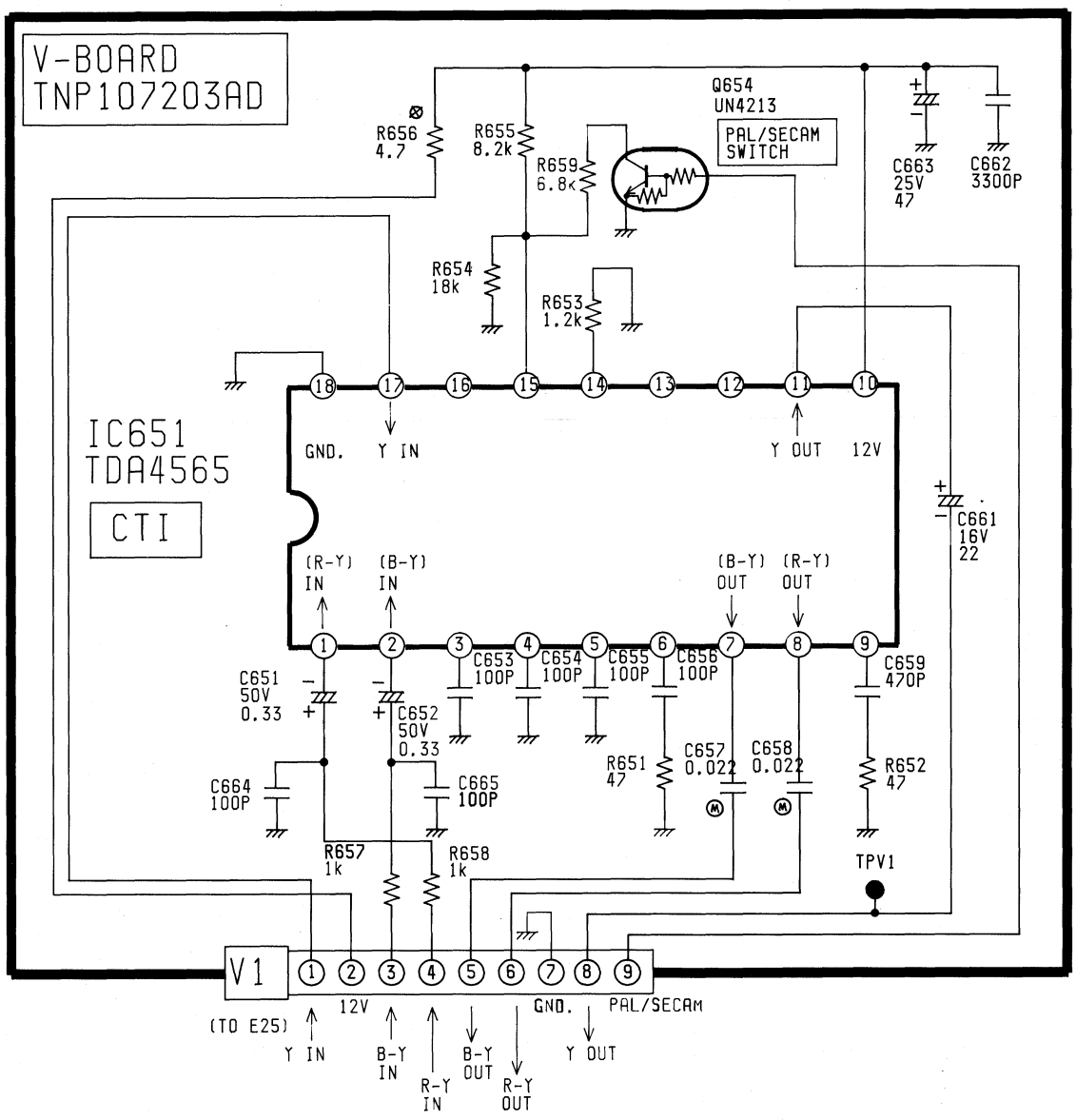
Y-BOARD
TNP107221AF

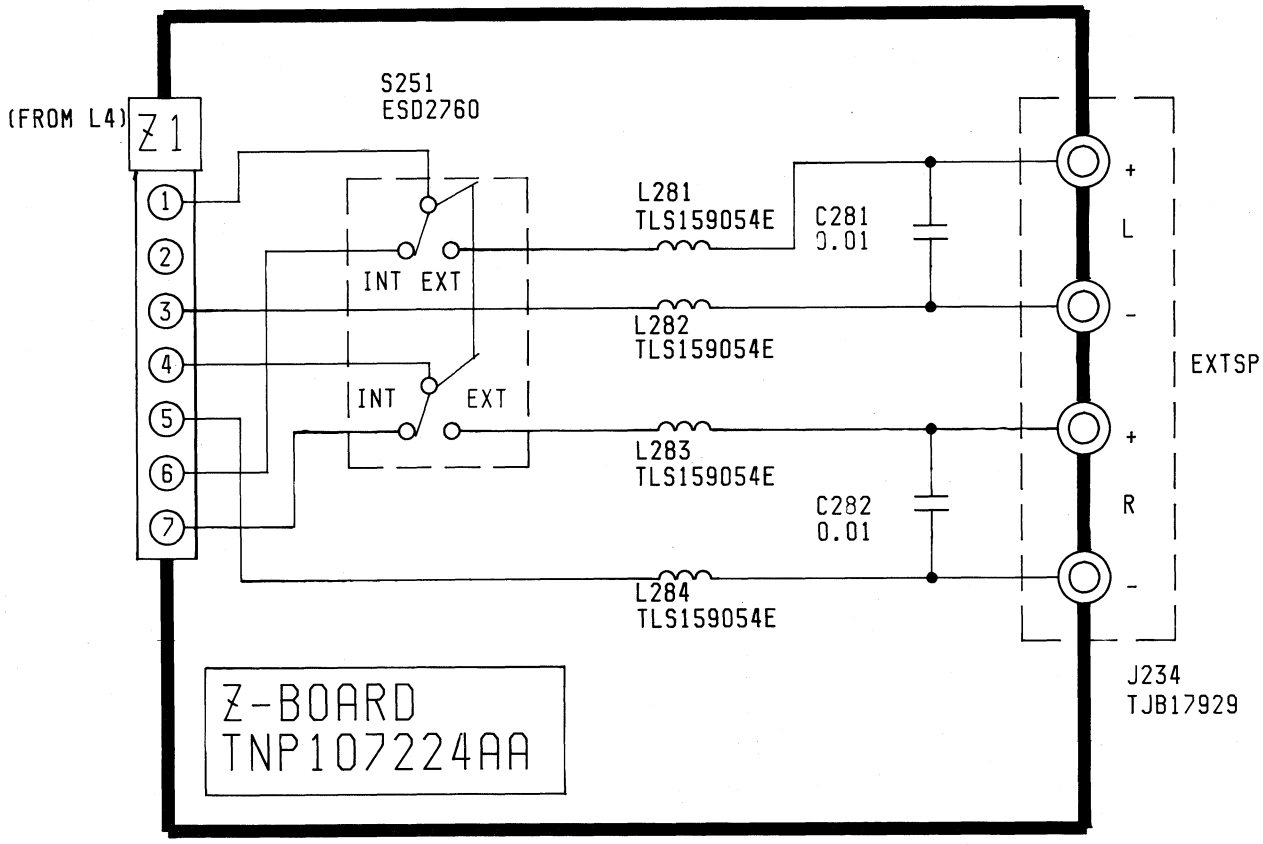
REMOTE CONTROL TRANSMITTER
TNQ8E0403

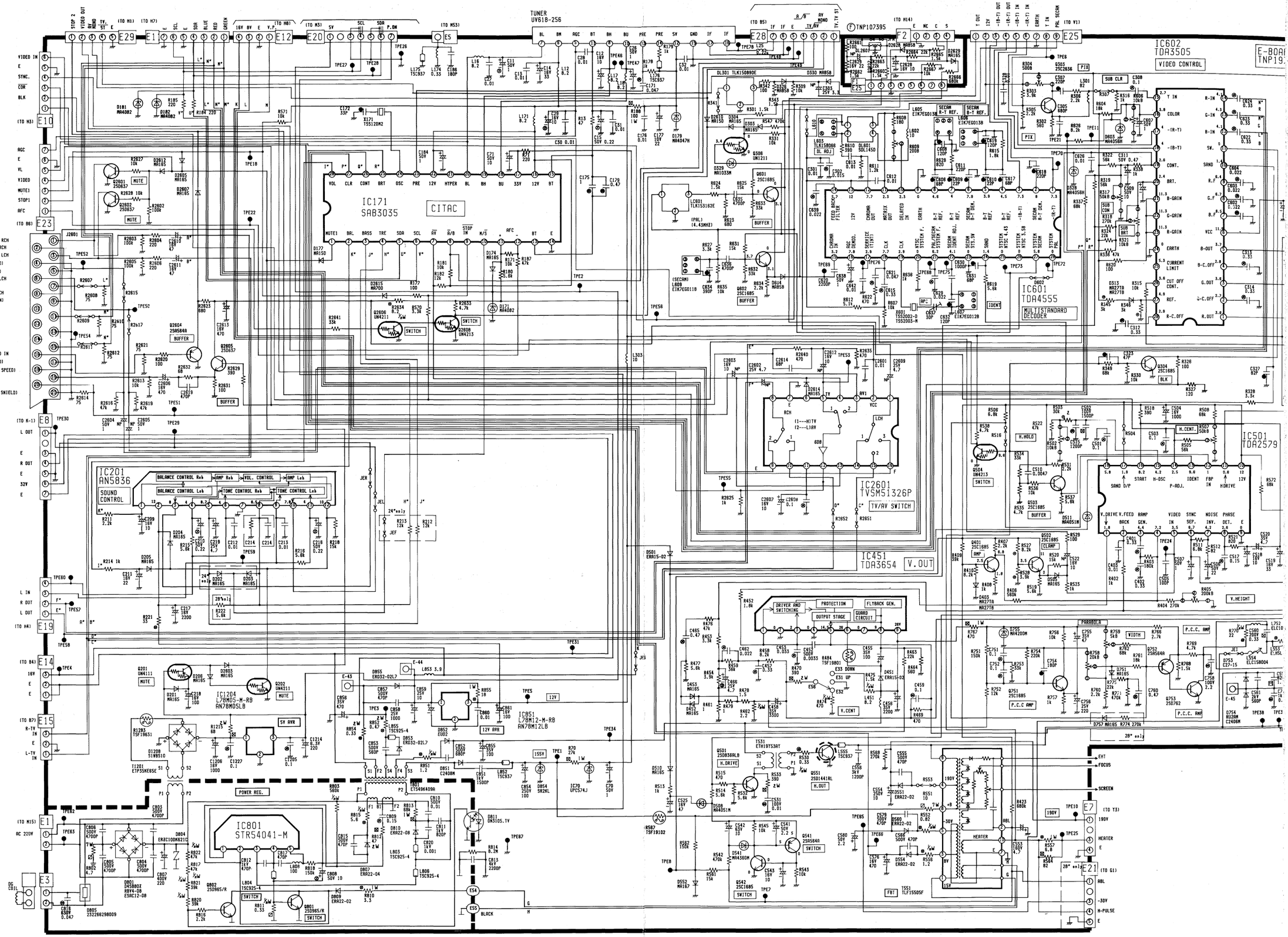
FERNBEDIENUNG
TNQ8E0403

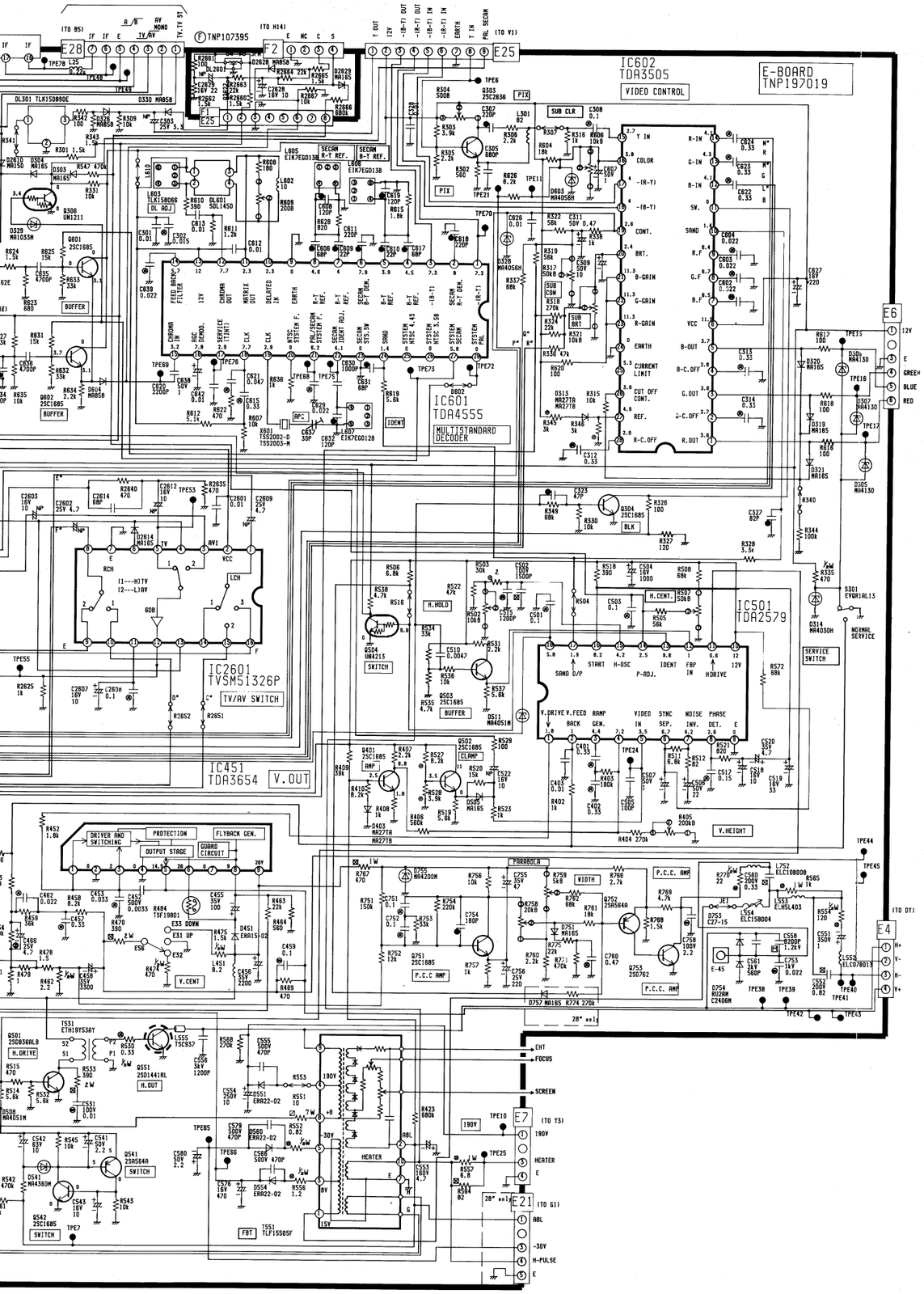

R.CH
L.CH
VIDEO
(FROM H11)
L6
VIDEO IN
L.CH IN
R.CH IN
AV3
12V
L+R
E
(TO H8)
L5
R235 2.7
C235 16V 470
R236 1.2k
Q235 2SC1383NC
R237 2.7
C236 16V 470
R240 220k
R239 47k
D235 MA27W
R238 2.7
Q236 2SA683/Q
L238 TLS159054E
C237 50V 0.47
R243 100kB
R241 100
C238 16V 10
Q237 2SC1685
R247 180
C239 0.01
J236 TJS37160
L239 TLS159054E
(FROM K2)
L1
C294 0.001
L251 TLS159054E
J251 TJS37170
L IN
E(L)
R IN
E(R)
L252 TLS159054E
L253 TLS159054E
L254 TLS159054E
C298 0.01
C297 0.01
R279 220 1W
R278 220 1W
JLL
JLM
C295 50V 22
L2
(TO Z1)
L4
JLN
JLP
C296 50V 22
L3
L-BOARD
TNP107227AB


IC2351
STK4412
AUDIO AMPLIFIER
PREAMP
PRE DRIVER
POWER AMP.
BOOT-STRAPPING
BIAS
C2353 50V 0.47
C2372 0.0047
C2357 35V 47
C2366 0.082
R2364 3.3k
R2367 4.7k
R2368 470
R2355 10k
C2351 0.018
C2355 25V 220
C2370 0.027
R2353 330
R2351 1k
R2357 100k
C2359 0.1
R2359 4.7
C2361 50V 1000
R2366 4.7
R2363 100
C2363 50V 1
C2368 50V 4700
D2351 RD13FB
C2369 50V 1000
R2362 91k
C2364 35V 10
R2361 270k
C2365 50V 100
C2358 35V 47
C2373 0.0047
R2369 4.7k
R2365 3.3k
R2370 470
C2371 0.027
R2356 10k
C2360 0.1
R2360 4.7
C2362 50V 1000
C2354 50V 0.47
C2367 0.082
C2352 0.018
C2356 25V 220
R2354 330
R2352 1k
R2358 100k
K-BOARD
TNP107172AD
K1
K2
E 32V
R IN
L IN
(TO E8)
E
R OUT
L OUT
(TO L1)


V-BOARD
TNP107203AD
R656
4.7
R655
8.2k
R659
6.8k
Q654
UN4213
PAL/SECAM
SWITCH
C663
25V
47
C662
3300P
R654
18k
R653
1.2k
IC651
TDA4565
CTI
GND.
Y IN
Y OUT
12V
C661
16V
22
(R-Y)
IN
(B-Y)
IN
(B-Y)
OUT
(R-Y)
OUT
C651
50V
0.33
C652
50V
0.33
C653
100P
C654
100P
C655
100P
C656
100P
C659
470P
C664
100P
C665
100P
R651
47
C657
0.022
C658
0.022
R652
47
R657
1k
R658
1k
TPV1
V1
(TO E25)
12V
GND.
PAL/SECAM
Y IN
B-Y
IN
B-Y
OUT
R-Y
IN
R-Y
OUT
Y OUT


(FROM L4)
Z1
S251
ESD2760
INT EXT
INT EXT
L281
TLS159054E
L282
TLS159054E
L283
TLS159054E
L284
TLS159054E
C281
0.01
C282
0.01
L
R
EXTSP
J234
TJB17929
Z-BOARD
TNP107224AA


TUNER
UV618-256
TNP107395
IC602
TDA3505
VIDEO CONTROL
IC171
SAB3035
CITAC
IC601
TDA4555
MULTISTANDARD
DECODER
IC201
AN5836
SOUND
CONTROL
IC1204
L78M05-M-RB
AN78M05LB
IC801
STR54041-M
IC501
TDA2579
IC2601
TVSM51326P
TV/AV SWITCH
IC451
TDA3654
V.OUT
POWER REG.
SWITCH
BUFFER
MUTE
PIX
BL ADJ
IDENT
H.OUT
V.CENT
V.HEIGHT
H.CENT.
W.HOLD
SAND D/P
P-ADJ.
H.DRIVE
FBT
HEATER
PARABOLA
WIDTH
P.C.C. AMP
CLAMP
AMP
DRIVER AND SWITCHING
PROTECTION
OUTPUT STAGE
FLYBACK GEN.
GUARD CIRCUIT
SOUND CONTROL
BALANCE CONTROL Reb
BALANCE CONTROL Leb
AMP Reb
AMP Leb
VOL. CONTROL
TONE CONTROL Reb
TONE CONTROL Leb
VIDEO IN
E
SYNC.
COR
BLK
AGC
VL
VIDEO
MUTE1
STOP1
AFC
AUDUO OUT RCH
AUDIO IN RCH
AUDIO OUT LCH
GND (AUDIO)
GND (BLUE)
AUDIO IN LCH
BLUE
SLOW SWITCH
GND (GREEN)
NC
GREEN
NC
GND (RED)
RED
HIGH SPEED IN
GND (VIDEO)
GND (HIGH SPEED)
VIDEO OUT
VIDEO IN
GND (PLUG SNIELD)
L OUT
R OUT
32V
L IN
R OUT
L OUT
R-TV IN
L-TV IN
AC 220V
DG COIL
EHT
FOCUS
SCREEN
190V
HEATER
-30V
H-PULSE
ABL
BLACK
E-BOA
TNP19

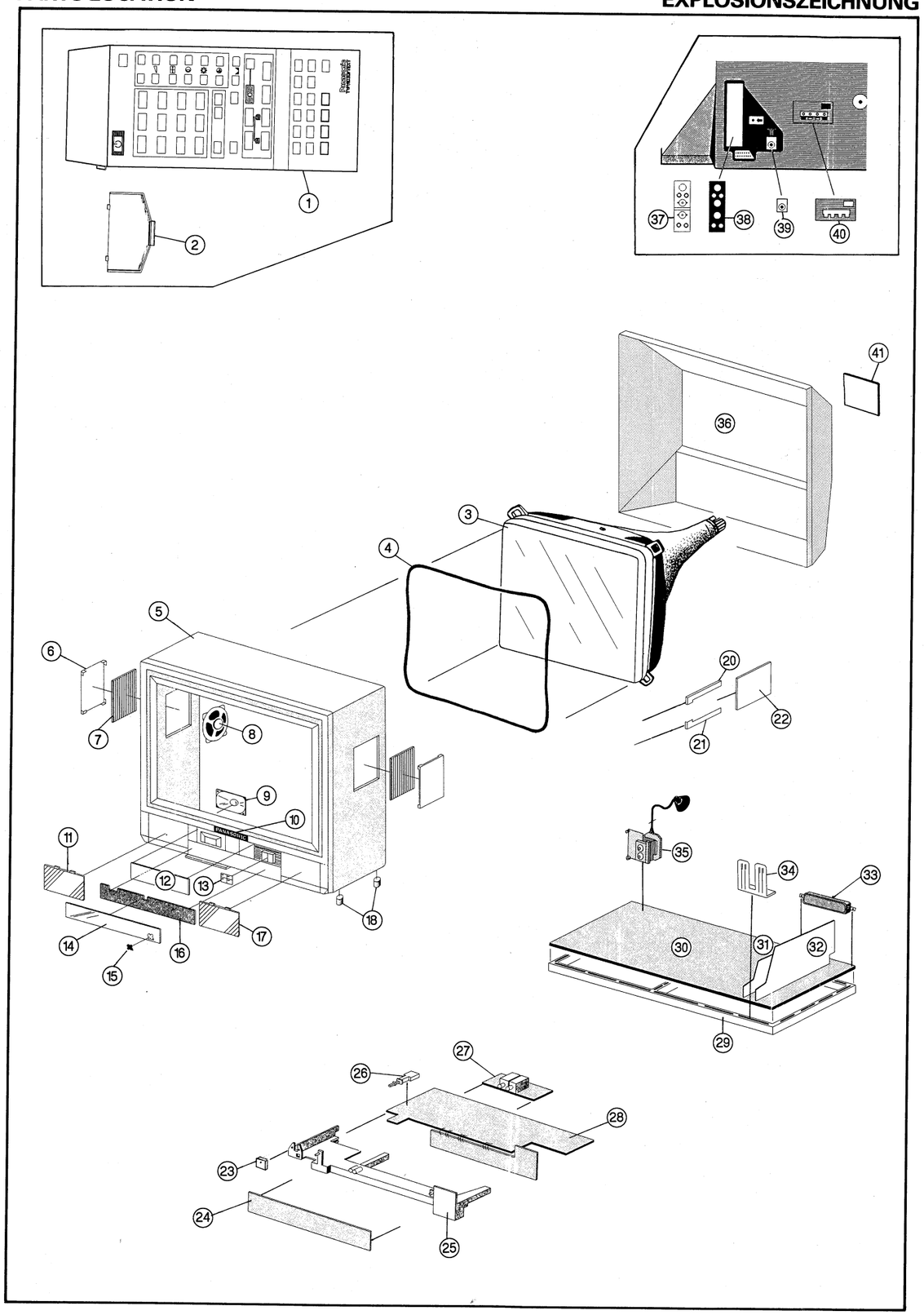


WAVEFORM PATTERN
SIGNAL TABELLE

1C601 PIN (15) 170mVp-p (20μs)	1C601 PIN (12) 17Vp-p (20μs)	1C602 PIN (15) 450mV (20μs)
1C501 PIN (1) 5.2Vp-p (5ms)	1C501 PIN (11) 1.5Vp-p (20μs)	1C451 PIN (1) 2.8Vp-p (5ms)
1C451 PIN (8) 23Vp-p (5ms)	1C451 PIN (5) 44Vp-p (5ms)	COLLECTOR Q501 48Vp-p (20μs)
BASE Q501 1.2Vp-p (20μs)	BASE Q551 30Vp-p (20μs)	TPE39 550Vp-p (20μs)
T551 PIN (8) 14Vp-p (20μs)	TPE10 180Vp-p (20μs)	T551 PIN (10) 24Vp-p (20μs)
TPE15 3.5Vp-p (20μs)	TPE16 3.5Vp-p (20μs)	TPE17 3.5Vp-p (20μs)
TPY1 120Vp-p (20μs)	TPY2 120Vp-p (20μs)	TPY3 115Vp-p (20μs)

PARTS LOCATION

EXPLOSIONSZEICHNUNG



REPLACEMENTS PARTS LIST

Important Safety Notice
Components identified by ⚠ mark have special characteristics important for safety. When replacing any of these components, use only manufacturer's specified parts.

ERSATZTEILLISTE

Wichtiger Sicherheitshinweis
Teile, die mit einen Hinweis ⚠ gekennzeichnet sind, sind wichtig für die Sicherheit. Sollte ein Auswechsein erforderlich sein, sind unbedingt Originalteile einzusetzen.

MISCELLANEOUS COMPONENTS

Ref No.	Part No.	Description
1)	TNQ8E0403	remote control
2)	UR51EC319	battery cover
3)	A59EAK01X01	C.R.T. ⚠
4)	138-94350	degauss coil ⚠
5)	TXFKYM2014-4	cabinet ⚠
6)	TKP1757201	side speaker net
7)	TKJ17215	side speaker grille
8)	EAS12P224S	speaker
9)	EAS9D08CG	speaker
10)	TBM17390-2	Panasonic badge
11)	TKP1757211-1	front speaker net (left)
12)	TKP1510912	smoked panel
13)	TBX2583101	prog/vol button
14)	TKP2719788	lid
15)	TBM17461	Q badge
16)	TBM120394	preset label
17)	TKP1757191-1	front speaker net (right)
18)	TBL171306	foot
20)	TMZ179958	K P.C.B. support bracket
21)	TMZ179959	K P.C.B. support bracket
22)	TNP107172AD	K P.C.B. ⚠
23)	TBX2583001	power button
24)	TNP107226AG	N P.C.B. ⚠
25)	TMW27169	control bracket
26) S801	ESB99267S	switch
27)	TNP107227AB	L P.C.B. ⚠
28)	TNP107228BG	M P.C.B. ⚠
29)	TMX17110	chassis support bracket
30)	TNP197019AG	E P.C.B. ⚠
31)	TNP107422AC	B P.C.B. ⚠
32)	TNP107202AA	H P.C.B. ⚠
33) J2601	TJS118900	21 pin terminal
34)	TMX17111-1	B/H P.C.B. support bracket
35) T551	TLF15505F	transformer ⚠
36)	TKU523801	rear cover ⚠
37)	TJB17630	AV terminal
38)	TBM120703	AV terminal label
39)	TBM179007	Ant terminal label
40)	TBM8E996-1	Ext speaker label
41)	TBM120702	back cover label
	TBX3783600	knob
	TEK17918	door catcher
	TNP107203AD	V P.C.B. ⚠
	TNP107221AF	Y P.C.B. ⚠
	TNP107224AA	Z P.C.B. ⚠
	TNP107395	F P.C.B. ⚠
	TPC1845405	carton
	TQB8E0401	instruction book
	TSX5131	power lead ⚠
	UM-4NEP/2S	battery
	UV618-256	tuner ⚠
J234	TJB17929	aerial terminal
F801	195-3.15	fuse ⚠
	520-001	fuse holder
DL301	TLK150890E	coil
DL601	SDL145D	delay line
S251	ESD2760	switch
S301	EVQR1AL13	switch
S801	ESB99267S	switch
S1207	EVQQS607T	switch
S1208	EVQQSC13K	switch
S1209	EVQQSC11G	switch
S1213	EVQQS607T	switch
S1215	EVQQSC11G	switch
S1218	EVQQS607T	switch
S1220	EVQQSC13K	switch
S1222	EVQQS607T	switch
S1223	EVQQSC11G	switch
S1228	EVQQSC11G	switch
S1229	ESB64605	switch
S1230	ESB64605	switch
S1231	EVQQSC13K	switch
S1232	EVQQSC13K	switch
S1233	EVQQSC13K	switch
S1234	EVQQSC13K	switch
S1235	EVQQSC13K	switch
S1236	EVQQSC13K	switch
X101	SW174A	filter
X131	EFCS5R5MW3	filter
X171	TSS120M2	crystal
X210	EFCS5R5MS4	filter
X211	EFCS5R5MS4	filter
X601	TSS2003-M	crystal
X1201	TSS970D	crystal
X2103	EFCS5R74MS4A	filter
X2104	EFCS5R74MS4A	filter
X2108	EFCA6R0MB3	filter
X3501	TSS2004-M	crystal
X3503	TSS970D	crystal
X3504	TFOA6R0MO2A2	filter
J107	ERD25TJ101 carbon	100Ω ±5% ¼W

RESISTORS

Ref No.	Part No.				
R13	ERD25TJ470	carbon	47Ω	±5%	¼W
R21	ERD25TJ562	carbon	5.6kΩ	±5%	¼W
R25	ERD25TJ680	carbon	68Ω	±5%	¼W
R26	ERD25TJ470	carbon	47Ω	±5%	¼W
R44	ERD25TJ562	carbon	5.6kΩ	±5%	¼W
R45	ERD25TJ821	carbon	820Ω	±5%	¼W
R47	ERD25TJ102	carbon	1kΩ	±5%	¼W
R70	ERG1ANJ273	metal	27kΩ	±5% ⚠	1W
R71	ERD25TJ221	carbon	220Ω	±5%	¼W
R124	ERQ14AJ100	fusable	10Ω	±5% ⚠	¼W
R130	ERD25TJ562	carbon	5.6kΩ	±5%	¼W
R131	ERD25TJ392	carbon	3.9kΩ	±5%	¼W
R133	ERD25TJ222	carbon	2.2kΩ	±5%	¼W
R134	ERD25TJ392	carbon	3.9kΩ	±5%	¼W
R135	EVND1AA00B53	variable resistor			
R136	ERD25TJ103	carbon	10kΩ	±5%	¼W
R137	ERD25TJ334	carbon	330kΩ	±5%	¼W
R138	ERD25TJ471	carbon	470Ω	±5%	¼W
R141	ERD25TJ122	carbon	1.2kΩ	±5%	¼W
R144	ERD25TJ473	carbon	47kΩ	±5%	¼W
R145	ERD25TJ470	carbon	47Ω	±5%	¼W
R146	ERD25TJ471	carbon	470Ω	±5%	¼W
R147	ERD25TJ334	carbon	330kΩ	±5%	¼W
R148	ERD25TJ334	carbon	330kΩ	±5%	¼W
R149	ERQ12HJ330	fusable	33Ω	±5% ⚠	½W
R150	ERD25TJ561	carbon	560Ω	±5%	¼W
R151	ERD25TJ271	carbon	270Ω	±5%	¼W
R152	ERDS2TJ101	carbon	100Ω	±5%	¼W
R153	ERD25TJ100	carbon	10Ω	±5%	¼W
R155	ERD25TJ332	carbon	3.3kΩ	±5%	¼W
R160	ERD25TJ221	carbon	220Ω	±5%	¼W
R171	ERD25TJ103	carbon	10kΩ	±5%	¼W
R177	ERD25TJ101	carbon	100Ω	±5%	¼W
R178	ERD25TJ102	carbon	1kΩ	±5%	¼W
R179	ERD25TJ102	carbon	1kΩ	±5%	¼W
R180	ERD25TJ562	carbon	5.6kΩ	±5%	¼W
R181	ERD25TJ103	carbon	10kΩ	±5%	¼W
R182	ERD25TJ123	carbon	12kΩ	±5%	¼W
R184	ERD25TJ221	carbon	220Ω	±5%	¼W
R185	ERD25TJ221	carbon	220Ω	±5%	¼W
R187	ERD25TJ473	carbon	47kΩ	±5%	¼W
R188	ERG1SJ101	metal	100Ω	±5% ⚠	1W
R210	ERD25TJ103	carbon	10kΩ	±5%	¼W
R211	ERD25TJ222	carbon	2.2kΩ	±5%	¼W
R212	ELB5A069	coil			
R212	ERD25TJ102	carbon	1kΩ	±5%	¼W
R213	ERG1ANJ470	metal film	47Ω	±5% ⚠	1W
R214	ERD25TJ331	carbon	330Ω	±5%	¼W
R215	ERD25TJ331	carbon	330Ω	±5%	¼W
R216	ERD25TJ822	carbon	8.2kΩ	±5%	¼W
R217	ERD25TJ822	carbon	8.2kΩ	±5%	¼W
R218	ERD25TJ182	carbon	1.8kΩ	±5%	¼W
R219	ERD25TJ333	carbon	33kΩ	±5%	¼W
R220	ERD25TJ103	carbon	10kΩ	±5%	¼W
R221	ERD25TJ222	carbon	2.2kΩ	±5%	¼W
R222	ERD25TJ102	carbon	1kΩ	±5%	¼W
R223	ERD25TJ103	carbon	10kΩ	±5%	¼W
R235	ERQ14AJ2R7	fusable	2.7Ω	±5% ⚠	¼W
R236	ERD25TJ122	carbon	1.2kΩ	±5%	¼W
R237	ERD25FJ2R7	carbon	2.7Ω	±5% ⚠	¼W
R238	ERD25FJ2R7	carbon	2.7Ω	±5% ⚠	¼W
R239	ERD25TJ473	carbon	47kΩ	±5%	¼W
R240	ERD25TJ224	carbon	220kΩ	±5%	¼W
R241	ERD25TJ101	carbon	100Ω	±5%	¼W
R243	EVUE2AM30B15	variable resistor			
R247	ERD25TJ181	carbon	180Ω	±5%	¼W
R278	ERG1ANJ221	metal	220Ω	±5% ⚠	1W
R279	ERG1ANJ221	metal	220Ω	±5% ⚠	1W
R301	ERD25TJ152	carbon	1.5kΩ	±5%	¼W
R302	ERD25TJ561	carbon	560Ω	±5%	¼W
R303	ERD25TJ392	carbon	3.9kΩ	±5%	¼W
R304	EVND4AA00B52	variable resistor			
R305	ERD25TJ222	carbon	2.2kΩ	±5%	¼W
R306	ERD25TJ222	carbon	2.2kΩ	±5%	¼W
R309	ERD25TJ103	carbon	10kΩ	±5%	¼W
R315	ERD25TJ103	carbon	10kΩ	±5%	¼W
R316	ERD25TJ102	carbon	1kΩ	±5%	¼W
R317	EVND4AA00B54	variable resistor			
R318	ERD25TJ274	carbon	270kΩ	±5%	¼W
R319	ERD25TJ563	carbon	56kΩ	±5%	¼W
R321	EVND4AA00B14	variable resistor			
R322	ERD25TJ563	carbon	56kΩ	±5%	¼W
R324	ERD25TJ223	carbon	22kΩ	±5%	¼W
R326	ERD25TJ101	carbon	100Ω	±5%	¼W
R327	ERD25TJ121	carbon	120Ω	±5%	¼W

Ref No.	
R328	ERD2
R330	ERD2
R331	ERD2
R335	ERDS
R336	ERD2
R337	ERD2
R338	ERD2
R342	ERD2
R343	ERD2
R344	ERD2
R345	ERQ2
R346	ERQ2
R349	ERD2
R351	ERG2
R352	ERG2
R353	ERG2
R354	ERD2
R355	ERD2
R356	ERD2
R357	EVN6
R358	EVN6
R359	ERD2
R360	ERD2
R361	ERD2
R362	EVN6
R363	EVN6
R364	EVN6
R365	ERDS
R366	ERDS
R367	ERDS
R390	ERDS
R391	ERD2
R392	ERD2
R393	ERD2
R394	ERD2
R402	ERD2
R403	ERD2
R404	ERD2
R405	EVND4
R406	ERD2
R407	ERD2
R408	ERD2
R409	ERD2
R410	ERD2
R423	ERD2
R452	ERD2
R453	ERD2
R454	ERD2
R458	ERD2
R459	ERD2
R461	ERD2
R462	ERDS
R463	ERD2
R464	ERD2
R469	ERD2
R470	ERG2S
R474	ERDS
R475	ERDS
R476	ERD2
R477	ERD2
R478	ERD2
R479	ERD2
R484	TSF19
R502	EVND4
R503	ERD25
R505	ERD2
R506	ERD2
R507	EVND4
R508	ERD2
R511	ERD2
R512	ERD2
R513	ERD2
R514	ERD2
R515	ERD2
R518	ERD2
R519	ERD2
R520	ERD2
R521	ERD2
R522	ERD2
R523	ERD2
R527	ERD25
R528	ERD25
R529	ERD2
R530	ERW12
R531	ERD2
R532	ERD2
R533	ERG2AN
R534	ERD2
R535	ERD2
R536	ERD2
R537	ERD2
R538	ERD2
R542	ERD2
R543	ERD2
R545	ERD2
R547	ERD2
R551	ERF7ZJ
R554	ERQ12H
R556	ERQ12H
R557	ERQ1CJ
R561	ERD2
R562	ERD2
R564	ERD2
R565	ERQ1CJ
R567	TSF19
R568	ERD2
R570	ERD2
R571	ERD2

ERSATZTEILLISTE

Wichtiger Sicherheitshinwels
Teile, die mit einen Hinweis ⚠ gekennzeichnet sind, sind wichtig für die Sicherheit. Sollte ein Auswechsein erforderlich sein, sind unbedingt Originalteile einzusetzen.

Ref No.	Part No.	Description
X3503	TSS970D	crystal
X3504	TFOA6R0MO2A2	filter
J107	ERD25TJ101	carbon 100Ω ±5% ¼W
	RESISTORS	
R13	ERD25TJ470	carbon 47Ω ±5% ¼W
R21	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R25	ERD25TJ680	carbon 68Ω ±5% ¼W
R26	ERD25TJ470	carbon 47Ω ±5% ¼W
R44	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R45	ERD25TJ821	carbon 820Ω ±5% ¼W
R47	ERD25TJ102	carbon 1kΩ ±5% ¼W
R70	ERG1ANJ273	metal 27kΩ ±5% ⚠ 1W
R71	ERD25TJ221	carbon 220Ω ±5% ¼W
R124	ERQ14AJ100	fusable 10Ω ±5% ⚠ ¼W
R130	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R131	ERD25TJ392	carbon 3.9kΩ ±5% ¼W
R133	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R134	ERD25TJ392	carbon 3.9kΩ ±5% ¼W
R135	EVND1AA00B53	variable resistor
R136	ERD25TJ103	carbon 10kΩ ±5% ¼W
R137	ERD25TJ334	carbon 330kΩ ±5% ¼W
R138	ERD25TJ471	carbon 470Ω ±5% ¼W
R141	ERD25TJ122	carbon 1.2kΩ ±5% ¼W
R144	ERD25TJ473	carbon 47kΩ ±5% ¼W
R145	ERD25TJ470	carbon 47Ω ±5% ¼W
R146	ERD25TJ471	carbon 470Ω ±5% ¼W
R147	ERD25TJ334	carbon 330kΩ ±5% ¼W
R148	ERD25TJ334	carbon 330kΩ ±5% ¼W
R149	ERQ12HJ330	fusable 33Ω ±5% ⚠ ¼W
R150	ERD25TJ561	carbon 560Ω ±5% ¼W
R151	ERD25TJ271	carbon 270Ω ±5% ¼W
R152	ERDS2TJ101	carbon 100Ω ±5% ¼W
R153	ERD25TJ100	carbon 10Ω ±5% ¼W
R155	ERD25TJ332	carbon 3.3kΩ ±5% ¼W
R160	ERD25TJ221	carbon 220Ω ±5% ¼W
R171	ERD25TJ103	carbon 10kΩ ±5% ¼W
R177	ERD25TJ101	carbon 100Ω ±5% ¼W
R178	ERD25TJ102	carbon 1kΩ ±5% ¼W
R179	ERD25TJ102	carbon 1kΩ ±5% ¼W
R180	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R181	ERD25TJ103	carbon 10kΩ ±5% ¼W
R182	ERD25TJ123	carbon 12kΩ ±5% ¼W
R184	ERD25TJ221	carbon 220Ω ±5% ¼W
R185	ERD25TJ221	carbon 220Ω ±5% ¼W
R187	ERD25TJ473	carbon 47kΩ ±5% ¼W
R188	ERG1SJ101	metal 100Ω ±5% ⚠ 1W
R210	ERD25TJ103	carbon 10kΩ ±5% ¼W
R211	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R212	ELB5A069	coil
R212	ERD25TJ102	carbon 1kΩ ±5% ¼W
R213	ERG1ANJ470	metal film 47Ω ±5% ⚠ 1W
R214	ERD25TJ331	carbon 330Ω ±5% ¼W
R215	ERD25TJ331	carbon 330Ω ±5% ¼W
R216	ERD25TJ822	carbon 8.2kΩ ±5% ¼W
R217	ERD25TJ822	carbon 8.2kΩ ±5% ¼W
R218	ERD25TJ182	carbon 1.8kΩ ±5% ¼W
R219	ERD25TJ333	carbon 33kΩ ±5% ¼W
R220	ERD25TJ103	carbon 10kΩ ±5% ¼W
R221	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R222	ERD25TJ102	carbon 1kΩ ±5% ¼W
R223	ERD25TJ103	carbon 10kΩ ±5% ¼W
R235	ERQ14AJ2R7	fusable 2.7Ω ±5% ⚠ ¼W
R236	ERD25TJ122	carbon 1.2kΩ ±5% ¼W
R237	ERD25FJ2R7	carbon 2.7Ω ±5% ⚠ ¼W
R238	ERD25FJ2R7	carbon 2.7Ω ±5% ⚠ ¼W
R239	ERD25TJ473	carbon 47kΩ ±5% ¼W
R240	ERD25TJ224	carbon 220kΩ ±5% ¼W
R241	ERD25TJ101	carbon 100Ω ±5% ¼W
R243	EVUE2AM30B15	variable resistor
R247	ERD25TJ181	carbon 180Ω ±5% ¼W
R278	ERG1ANJ221	metal 220Ω ±5% ⚠ 1W
R279	ERG1ANJ221	metal 220Ω ±5% ⚠ 1W
R301	ERD25TJ152	carbon 1.5kΩ ±5% ¼W
R302	ERD25TJ561	carbon 560Ω ±5% ¼W
R303	ERD25TJ392	carbon 3.9kΩ ±5% ¼W
R304	EVND4AA00B52	variable resistor
R305	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R306	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R309	ERD25TJ103	carbon 10kΩ ±5% ¼W
R315	ERD25TJ103	carbon 10kΩ ±5% ¼W
R316	ERD25TJ102	carbon 1kΩ ±5% ¼W
R317	EVND4AA00B54	variable resistor
R318	ERD25TJ274	carbon 270kΩ ±5% ¼W
R319	ERD25TJ563	carbon 56kΩ ±5% ¼W
R321	EVND4AA00B14	variable resistor
R322	ERD25TJ563	carbon 56kΩ ±5% ¼W
R324	ERD25TJ223	carbon 22kΩ ±5% ¼W
R326	ERD25TJ101	carbon 100Ω ±5% ¼W
R327	ERD25TJ121	carbon 120Ω ±5% ¼W

Ref No.	Part No.	Description
R328	ERD25TJ332	carbon 3.3kΩ ±5% ¼W
R330	ERD25TJ103	carbon 10kΩ ±5% ¼W
R331	ERD25TJ103	carbon 10kΩ ±5% ¼W
R335	ERDS1TJ471	carbon 470Ω ±5% ¼W
R336	ERD25TJ473	carbon 47kΩ ±5% ¼W
R337	ERD25TJ683	carbon 680kΩ ±5% ¼W
R338	ERD25TJ102	carbon 1kΩ ±5% ¼W
R342	ERD25TJ101	carbon 100Ω ±5% ¼W
R343	ERD25TJ152	carbon 1.5kΩ ±5% ¼W
R344	ERD25TJ104	carbon 100kΩ ±5% ¼W
R345	ERQ25CKF3001	film 3kΩ ±1% ⚠ ¼W
R346	ERQ25CKF3001	film 3kΩ ±1% ⚠ ¼W
R349	ERD25TJ683	carbon 680kΩ ±5% ¼W
R351	ERG2ANJ822	metal 8.2kΩ ±5% ⚠ 2W
R352	ERG2ANJ822	metal 8.2kΩ ±5% ⚠ 2W
R353	ERG2ANJ822	metal 8.2kΩ ±5% ⚠ 2W
R354	ERD25TJ181	carbon 180Ω ±5% ¼W
R355	ERD25TJ271	carbon 270Ω ±5% ¼W
R356	ERD25TJ181	carbon 180Ω ±5% ¼W
R357	EVN65AA00B22	variable resistor
R358	EVN65AA00B22	variable resistor
R359	ERD25TJ471	carbon 470Ω ±5% ¼W
R360	ERD25TJ471	carbon 470Ω ±5% ¼W
R361	ERD25TJ471	carbon 470Ω ±5% ¼W
R362	EVN65AA00B53	variable resistor
R363	EVN65AA00B53	variable resistor
R364	EVN65AA00B53	variable resistor
R365	ERDS1FJ152	carbon 1.5kΩ ±5% ¼W
R366	ERDS1TJ152	carbon 1.5kΩ ±5% ¼W
R367	ERDS1TJ152	carbon 1.5kΩ ±5% ¼W
R390	ERDS1TJ124	carbon 120kΩ ±5% ¼W
R391	ERD25TJ103	carbon 10kΩ ±5% ¼W
R392	ERD25TJ561	carbon 560Ω ±5% ¼W
R393	ERD25TJ561	carbon 560Ω ±5% ¼W
R394	ERD25TJ561	carbon 560Ω ±5% ¼W
R402	ERD25TJ102	carbon 1kΩ ±5% ¼W
R403	ERD25TJ184	carbon 180kΩ ±5% ¼W
R404	ERD25TJ274	carbon 270kΩ ±5% ¼W
R405	EVND4AA00B25	variable resistor
R406	ERD25TJ564	carbon 560kΩ ±5% ¼W
R407	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R408	ERD25TJ102	carbon 1kΩ ±5% ¼W
R409	ERD25TJ393	carbon 39kΩ ±5% ¼W
R410	ERD25TJ822	carbon 8.2kΩ ±5% ¼W
R423	ERD25TJ684	carbon 680kΩ ±5% ¼W
R452	ERD25TJ182	carbon 1.8kΩ ±5% ¼W
R453	ERD25TJ332	carbon 3.3kΩ ±5% ¼W
R454	ERD25TJ392	carbon 3.9kΩ ±5% ¼W
R458	ERD25TJ822	carbon 8.2kΩ ±5% ¼W
R459	ERD25TJ363	carbon 36kΩ ±5% ¼W
R461	ERD25TJ1R0	carbon 1Ω ±5% ¼W
R462	ERDS1TJ2R2	carbon 2.2Ω ±5% ¼W
R463	ERD25TJ223	carbon 22kΩ ±5% ¼W
R464	ERD25TJ561	carbon 560Ω ±5% ¼W
R469	ERD25TJ471	carbon 470Ω ±5% ¼W
R470	ERG2SJ391	metal 390Ω ±5% ⚠ 2W
R474	ERDS1TJ471	carbon 470Ω ±5% ¼W
R475	ERDS1TJ152	carbon 1.5kΩ ±5% ¼W
R476	ERD25TJ473	carbon 47kΩ ±5% ¼W
R477	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R478	ERD25TJ1R5	carbon 1.5Ω ±5% ¼W
R479	ERD25TJ1R0	carbon 1Ω ±5% ¼W
R484	TSF19801	fuse ⚠
R502	EVND4AA00B14	variable resistor
R503	ERQ25CKF3002	film 30kΩ ±1% ⚠ ¼W
R505	ERD25TJ563	carbon 56kΩ ±5% ¼W
R506	ERD25TJ682	carbon 6.8kΩ ±5% ¼W
R507	EVND4AA00B54	variable resistor
R508	ERD25TJ683	carbon 680kΩ ±5% ¼W
R511	ERD25TJ682	carbon 6.8kΩ ±5% ¼W
R512	ERD25TJ820	carbon 82Ω ±5% ¼W
R513	ERD25TJ102	carbon 1kΩ ±5% ¼W
R514	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R515	ERD25TJ471	carbon 470Ω ±5% ¼W
R518	ERD25TJ391	carbon 390Ω ±5% ¼W
R519	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R520	ERD25TJ153	carbon 15kΩ ±5% ¼W
R521	ERD25TJ821	carbon 820Ω ±5% ¼W
R522	ERD25TJ473	carbon 47kΩ ±5% ¼W
R523	ERD25TJ102	carbon 1kΩ ±5% ¼W
R527	ERQ25CKF8201	film 8.2kΩ ±1% ⚠ ¼W
R528	ERQ25CKF3901	film 3.9kΩ ±1% ⚠ ¼W
R529	ERD25TJ101	carbon 100Ω ±5% ¼W
R530	ERW12PKR33	fusable 0.33Ω ±5% ⚠ ¼W
R531	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R532	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R533	ERG2ANJ391	metal 390Ω ±5% ⚠ 2W
R534	ERD25TJ333	carbon 33kΩ ±5% ¼W
R535	ERD25TJ472	carbon 4.7kΩ ±5% ¼W
R536	ERD25TJ103	carbon 10kΩ ±5% ¼W
R537	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R538	ERD25TJ472	carbon 4.7kΩ ±5% ¼W
R542	ERD25TJ474	carbon 470kΩ ±5% ¼W
R543	ERD25TJ103	carbon 10kΩ ±5% ¼W
R545	ERD25TJ103	carbon 10kΩ ±5% ¼W
R547	ERD25TJ474	carbon 470kΩ ±5% ¼W
R551	ERF7ZJ100	wirewound 10Ω ±5% ⚠ 7W
R554	ERQ12HJ121	fusable 120Ω ±5% ⚠ ¼W
R556	ERQ12HJ1R2	fusable 1.2Ω ±5% ⚠ ¼W
R557	ERQ1CJP6R8	fusable 6.8Ω ±5% ⚠ 1W
R561	ERD25TJ153	carbon 15kΩ ±5% ¼W
R562	ERD25TJ154	carbon 150kΩ ±5% ¼W
R564	ERD25FJ820	carbon ⚠ 82Ω ±5% ¼W
R565	ERQ1CJP102	fusable 1kΩ ±5% ⚠ 1W
R567	TSF19102	fuse ⚠
R568	ERD25TJ274	carbon 270kΩ ±5% ¼W
R570	ERD25TJ332	carbon 3.3kΩ ±5% ¼W
R571	ERD25TJ103	carbon 10kΩ ±5% ¼W

Ref No.	Part No.	Description
R572	ERD25TJ683	carbon 680kΩ ±5% ¼W
R604	ERD25TJ183	carbon 18kΩ ±5% ¼W
R606	EVND4AA00B14	variable resistor
R607	ERD25TJ103	carbon 10kΩ ±5% ¼W
R608	ERD25TJ181	carbon 180Ω ±5% ¼W
R609	EVND4AA00B22	variable resistor
R610	ERD25TJ391	carbon 390Ω ±5% ¼W
R611	ERD25TJ122	carbon 1.2kΩ ±5% ¼W
R612	ERD25TJ512	carbon 5.1kΩ ±5% ¼W
R615	ERD25TJ182	carbon 1.8kΩ ±5% ¼W
R616	ERD25TJ101	carbon 100Ω ±5% ¼W
R617	ERD25TJ101	carbon 100Ω ±5% ¼W
R618	ERD25TJ101	carbon 100Ω ±5% ¼W
R619	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R620	ERD25TJ101	carbon 100Ω ±5% ¼W
R622	ERD25TJ471	carbon 470Ω ±5% ¼W
R623	ERD25TJ681	carbon 680Ω ±5% ¼W
R624	ERD25TJ152	carbon 1.5kΩ ±5% ¼W
R625	ERD25TJ153	carbon 15kΩ ±5% ¼W
R626	ERD25TJ822	carbon 8.2kΩ ±5% ¼W
R627	ERD25TJ332	carbon 3.3kΩ ±5% ¼W
R628	ERD25TJ821	carbon 820Ω ±5% ¼W
R631	ERD25TJ153	carbon 15kΩ ±5% ¼W
R632	ERD25TJ333	carbon 33kΩ ±5% ¼W
R633	ERD25TJ333	carbon 33kΩ ±5% ¼W
R634	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R635	ERD25TJ103	carbon 10kΩ ±5% ¼W
R636	ERD25TJ102	carbon 1kΩ ±5% ¼W
R651	ERD25TJ470	carbon 47Ω ±5% ¼W
R652	ERD25TJ470	carbon 47Ω ±5% ¼W
R653	ERD25TJ122	carbon 1.2kΩ ±5% ¼W
R654	ERD25TJ183	carbon 18kΩ ±5% ¼W
R655	ERD25TJ822	carbon 8.2kΩ ±5% ¼W
R656	ERQ14AJ4R7	fusable 4.7Ω ±5% ⚠ 1W
R657	ERD25TJ102	carbon 1kΩ ±5% ¼W
R658	ERD25TJ102	carbon 1kΩ ±5% ¼W
R659	ERDS2TJ682	carbon 6.8kΩ ±5% ¼W
R751	ERD25TJ154	carbon 150kΩ ±5% ¼W
R752	ERD25TJ123	carbon 12kΩ ±5% ¼W
R753	ERD25TJ333	carbon 33kΩ ±5% ¼W
R754	ERD25TJ224	carbon 220kΩ ±5% ¼W
R756	ERD25TJ103	carbon 10kΩ ±5% ¼W
R757	ERD25TJ102	carbon 1kΩ ±5% ¼W
R758	EVND4AA00B24	variable resistor
R759	EVND4AA00B53	variable resistor
R760	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R761	ERD25TJ183	carbon 18kΩ ±5% ¼W
R762	ERD25TJ683	carbon 680kΩ ±5% ¼W
R766	ERD25TJ272	carbon 2.7kΩ ±5% ¼W
R767	ERG1ANJ471	metal 470Ω ±5% ⚠ 1W
R768	ERD25TJ152	carbon 1.5kΩ ±5% ¼W
R769	ERD25TJ472	carbon 4.7kΩ ±5% ¼W
R770	ERQ12HJ220	fusable 22Ω ±5% ⚠ ¼W
R771	ERD25TJ474	carbon 470kΩ ±5% ¼W
R775	ERD25TJ223	carbon 22kΩ ±5% ¼W
R802	ERF7ZK4R7	fusable 4.7Ω ±5% ⚠ 7W
R803	ERDS1TJ564	carbon 560kΩ ±5% ¼W
R804	ERDS1TJ333	carbon 33kΩ ±5% ¼W
R805	ERDS1TJ333	carbon 33kΩ ±5% ¼W
R810	ERQ1CJP3R3	fusable 3.3Ω ±5% ⚠ 1W
R811	ERW12PKR33	fusable 0.33Ω ±5% ⚠ ¼W
R812	ERG2ANJ470	metal 47Ω ±5% ⚠ 2W
R813	ERG1ANJ683	metal 68kΩ ±5% ⚠ 1W
R814	ERD75TAJ825	carbon 8.2MΩ ±5% ¼W
R815	ERQ12HJ5R6	fusable 5.6Ω ±5% ⚠ ¼W
R816	ERD25TJ222	carbon 2.2kΩ ±5% ¼W
R817	ERDS1TJ473	carbon 47kΩ ±5% ¼W
R818	ERD25TJ154	carbon 150kΩ ±5% ¼W
R820	ERDS1TJ393	carbon 39kΩ ±5% ¼W
R821	ERDS1TJ393	carbon 39kΩ ±5% ¼W
R822	ERDS1TJ473	carbon 47kΩ ±5% ¼W
R851	ERQ12HJ1R2	fusable 1.2Ω ±5% ⚠ ¼W
R852	ERQ2CKR47	metal 0.47Ω ±5% ⚠ 2W
R854	ERQ1CKPR33	fusable 0.33Ω ±5% ⚠ 1W
R855	ERG3SJ180	metal 18Ω ±5% ⚠ 3W
R1101	ERD25TJ102	carbon 1kΩ ±5% ¼W
R1102	ERD25TJ100	carbon 10Ω ±5% ¼W
R1103	ERD25TJ103	carbon 10kΩ ±5% ¼W
R1104	ERD25TJ101	carbon 100Ω ±5% ¼W
R1105	ERD25TJ223	carbon 22kΩ ±5% ¼W
R1201	ERD25TJ103	carbon 10kΩ ±5% ¼W
R1202	ERD25TJ221	carbon 220Ω ±5% ¼W
R1203	ERD25TJ221	carbon 220Ω ±5% ¼W
R1204	ERD25TJ221	carbon 220Ω ±5% ¼W
R1205	ERD25TJ221	carbon 220Ω ±5% ¼W
R1206	ERD25TJ331	carbon 330Ω ±5% ¼W
R1207	ERD25TJ221	carbon 220Ω ±5% ¼W
R1209	ERD25TJ182	carbon 1.8kΩ ±5% ¼W
R1210	ERD25TJ182	carbon 1.8kΩ ±5% ¼W
R1215	ERG2ANJ680	metal 68Ω ±5% ⚠ 2W
R1219	ERD25TJ472	carbon 4.7kΩ ±5% ¼W
R1221	ERD25TJ471	carbon 470Ω ±5% ¼W
R1222	ERD25TJ471	carbon 470Ω ±5% ¼W
R1223	ERD25TJ471	carbon 470Ω ±5% ¼W
R1224	ERD25TJ471	carbon 470Ω ±5% ¼W
R1225	ERD25TJ471	carbon 470Ω ±5% ¼W
R1226	ERD25TJ471	carbon 470Ω ±5% ¼W
R1227	ERD25TJ471	carbon 470Ω ±5% ¼W
R1229	ERD25TJ471	carbon 470Ω ±5% ¼W
R1233	ERD25TJ105	carbon 1MΩ ±5% ¼W
R1234	ERD25TJ103	carbon 10kΩ ±5% ¼W
R1235	ERD25TJ103	carbon 10kΩ ±5% ¼W
R1236	ERD25TJ472	carbon 4.7kΩ ±5% ¼W
R1237	ERD25TJ221	carbon 220Ω ±5% ¼W
R1238	ERD25TJ562	carbon 5.6kΩ ±5% ¼W
R1239	ERD25TJ221	carbon 220Ω ±5% ¼W
R1240	ERD25TJ221	carbon 220Ω ±5% ¼W
R1241	ERD25TJ221	carbon 220Ω ±5% ¼W

Ref No.	Part No.	Description			
R1251	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1252	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1253	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1254	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1255	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1256	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1257	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1258	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1259	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1261	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1262	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1263	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1264	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1265	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1266	ERD25TJ391	carbon	390Ω	±5%	⅛W
R1267	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R1268	ERD25TJ392	carbon	3.9kΩ	±5%	⅛W
R1270	ERD25TJ563	carbon	56kΩ	±5%	⅛W
R1271	ERD25TJ392	carbon	3.9kΩ	±5%	⅛W
R1273	ERD25TJ221	carbon	220Ω	±5%	⅛W
R1274	ERD25TJ221	carbon	220Ω	±5%	⅛W
R1276	ERD25TJ221	carbon	220Ω	±5%	⅛W
R1278	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R1281	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R1283	TSF19631	fuse	⚠		
R1285	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R1286	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R1287	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R1288	ERD25TJ682	carbon	6.8kΩ	±5%	⅛W
R2122	ERD25TJ392	carbon	3.9kΩ	±5%	⅛W
R2123	ERD25TJ392	carbon	3.9kΩ	±5%	⅛W
R2128	ERD25TJ221	carbon	220Ω	±5%	⅛W
R2134	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2160	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2161	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2162	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2163	ERD25TJ332	carbon	3.3kΩ	±5%	⅛W
R2164	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2165	ERD25TJ181	carbon	180Ω	±5%	⅛W
R2168	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2169	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2171	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2201	ERD25TJ474	carbon	470kΩ	±5%	⅛W
R2202	ERD25TJ182	carbon	1.8kΩ	±5%	⅛W
R2203	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2204	ERD25TJ273	carbon	27kΩ	±5%	⅛W
R2205	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2206	ERD25TJ562	carbon	5.6kΩ	±5%	⅛W
R2207	ERD25TJ563	carbon	56kΩ	±5%	⅛W
R2208	ERD25TJ224	carbon	220kΩ	±5%	⅛W
R2209	EVND4AA00B52	variable resistor			
R2210	EVND4AA00B32	variable resistor			
R2211	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2212	ERD25TJ393	carbon	39kΩ	±5%	⅛W
R2213	ERD25TJ224	carbon	220kΩ	±5%	⅛W
R2214	ERD25TJ153	carbon	15kΩ	±5%	⅛W
R2215	ERD25TJ824	carbon	820kΩ	±5%	⅛W
R2220	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2221	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2224	EVND4AA00B54	variable resistor			
R2225	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2226	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2227	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2228	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2230	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2231	ERD25TJ333	carbon	33kΩ	±5%	⅛W
R2232	ERD25TJ333	carbon	33kΩ	±5%	⅛W
R2233	ERD25TJ332	carbon	3.3kΩ	±5%	⅛W
R2235	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2236	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2237	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2240	ERQ14AJ330	fusable	33Ω	±5%	⚠ ⅛W
R2243	ERD25TJ271	carbon	270Ω	±5%	⅛W
R2247	ERD25TJ271	carbon	270Ω	±5%	⅛W
R2248	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2251	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2254	ERD25TJ272	carbon	2.7kΩ	±5%	⅛W
R2256	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2257	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2258	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2259	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2260	ERD25TJ333	carbon	33kΩ	±5%	⅛W
R2261	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2262	ERQ14AJ100	fusable	10Ω	±5%	⚠ ⅛W
R2264	ERQ12HJ470	fusable	47Ω	±5%	⚠ ⅛W
R2265	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2266	ERD25TJ333	carbon	33kΩ	±5%	⅛W
R2268	ERD25TJ153	carbon	15kΩ	±5%	⅛W
R2269	ERD25TJ153	carbon	15kΩ	±5%	⅛W
R2270	ERDS2TJ154	carbon	150kΩ	±5%	⅛W
R2271	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2301	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2305	ERD25TJ183	carbon	18kΩ	±5%	⅛W
R2306	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2307	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2308	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2310	ERD25TJ123	carbon	12kΩ	±5%	⅛W
R2312	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2313	ERD25TJ153	carbon	15kΩ	±5%	⅛W
R2314	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2315	ERD25TJ123	carbon	12kΩ	±5%	⅛W
R2316	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2317	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2318	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2319	ERD25TJ153	carbon	15kΩ	±5%	⅛W
R2320	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2321	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2322	ERD25TJ682	carbon	6.8kΩ	±5%	⅛W

Ref No.	Part No.	Description			
R2324	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2351	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2352	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2353	ERD25TJ331	carbon	330Ω	±5%	⅛W
R2354	ERD25TJ331	carbon	330Ω	±5%	⅛W
R2355	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2356	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2357	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2358	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2359	ERQ14AJ4R7	fusable	4.7Ω	±5%	⚠ 1W
R2360	ERQ14AJ4R7	fusable	4.7Ω	±5%	⚠ 1W
R2361	ERD25TJ274	carbon	270kΩ	±5%	⅛W
R2362	ERD25TJ913	carbon	91kΩ	±5%	⅛W
R2363	ERQ14AJ101	fusable	100Ω	±5%	⚠ ⅛W
R2364	ERD25TJ332	carbon	3.3kΩ	±5%	⅛W
R2365	ERD25TJ332	carbon	3.3kΩ	±5%	⅛W
R2366	ERF10ZK4R7	wound	4.7Ω	±5%	⚠ 10W
R2367	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2368	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2369	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2370	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2602	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2603	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2604	ERD25TJ221	carbon	220Ω	±5%	⅛W
R2605	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2606	ERD25TJ221	carbon	220Ω	±5%	⅛W
R2608	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2610	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2612	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2613	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2614	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2616	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2619	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2620	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2621	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2623	ERD25TJ681	carbon	680Ω	±5%	⅛W
R2625	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2627	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2628	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2629	ERD25TJ391	carbon	390Ω	±5%	⅛W
R2631	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2632	ERD25TJ680	carbon	68Ω	±5%	⅛W
R2633	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2634	ERQ12HJ8R2	fusable	8.2Ω	±5%	⚠ ⅛W
R2635	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2640	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2641	ERD25TJ333	carbon	33kΩ	±5%	⅛W
R2660	ERD25TJ152	carbon	1.5kΩ	±5%	⅛W
R2661	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2662	ERD25TJ152	carbon	1.5kΩ	±5%	⅛W
R2663	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2664	ERD25TJ223	carbon	22kΩ	±5%	⅛W
R2665	ERD25TJ182	carbon	1.8kΩ	±5%	⅛W
R2666	ERD25TJ684	carbon	680kΩ	±5%	⅛W
R2667	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2702	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2704	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2705	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2706	ERD25TJ562	carbon	5.6kΩ	±5%	⅛W
R2707	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2708	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2709	ERD25TJ151	carbon	150Ω	±5%	⅛W
R2710	EVND4AA00B23	variable resistor			
R2711	ERD25TJ562	carbon	5.6kΩ	±5%	⅛W
R2712	ERD25TJ393	carbon	39kΩ	±5%	⅛W
R2713	ERD25TJ222	carbon	2.2kΩ	±5%	⅛W
R2714	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2715	ERD25TJ822	carbon	8.2kΩ	±5%	⅛W
R2716	ERD25TJ332	carbon	3.3kΩ	±5%	⅛W
R2717	ERD25TJ393	carbon	39kΩ	±5%	⅛W
R2718	ERD25TJ562	carbon	5.6kΩ	±5%	⅛W
R2719	ERD25TJ823	carbon	82kΩ	±5%	⅛W
R2721	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2722	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2723	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2724	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2726	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2727	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2728	ERD25TJ472	carbon	4.7kΩ	±5%	⅛W
R2729	ERD25TJ222	carbon	2.2kΩ	±5%	⅛W
R2730	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2732	ERD25TJ272	carbon	2.7kΩ	±5%	⅛W
R2733	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2734	ERD25TJ680	carbon	68Ω	±5%	⅛W
R2735	ERD25TJ103	carbon	10kΩ	±5%	⅛W
R2736	ERD25TJ331	carbon	330Ω	±5%	⅛W
R2737	ERD25TJ331	carbon	330Ω	±5%	⅛W
R2738	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2739	ERD25TJ101	carbon	100Ω	±5%	⅛W
R2740	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2741	ERD25TJ104	carbon	100kΩ	±5%	⅛W
R2743	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2744	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2745	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2747	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2748	ERD25TJ471	carbon	470Ω	±5%	⅛W
R2759	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2760	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2771	ERD25TJ750	carbon	75Ω	±5%	⅛W
R2772	ERD25TJ473	carbon	47kΩ	±5%	⅛W
R2777	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2778	ERD25TJ151	carbon	150Ω	±5%	⅛W
R2779	ER025CKF9101	film	9.1kΩ	±1%	⚠ ⅛W
R2780	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2781	ER025CKF1502	film	15kΩ	±1%	⚠ ⅛W
R2782	ERD25TJ102	carbon	1kΩ	±5%	⅛W
R2783	ERD25TJ682	carbon	6.8kΩ	±5%	⅛W
R2784	ERD25TJ153	carbon	15kΩ	±5%	⅛W

Ref No.	Part No.	Description		
R2785	ERD25TJ102	carbon	1kΩ ±5%	¼W
R2786	ERD25TJ750	carbon	75Ω ±5%	¼W
R2787	ERD25TJ471	carbon	470Ω ±5%	¼W
R2789	ERD25TJ223	carbon	22kΩ ±5%	¼W
R2790	ERD25TJ681	carbon	680Ω ±5%	¼W
R2791	ERD25TJ393	carbon	39kΩ ±5%	¼W
R2792	ERD25TJ102	carbon	1kΩ ±5%	¼W
R2793	ERD25TJ822	carbon	8.2kΩ ±5%	¼W
R2794	ERD25TJ822	carbon	8.2kΩ ±5%	¼W
R2795	ERD25TJ221	carbon	220Ω ±5%	¼W
R2796	ERD25TJ102	carbon	1kΩ ±5%	¼W
R2797	ERD25TJ821	carbon	820Ω ±5%	¼W
R2799	ERD25TJ102	carbon	1kΩ ±5%	¼W
R3501	ERD25TJ221	carbon	220Ω ±5%	¼W
R3502	ERD25TJ392	carbon	3.9kΩ ±5%	¼W
R3503	ERD25TJ471	carbon	470Ω ±5%	¼W
R3504	ERD25TJ822	carbon	8.2kΩ ±5%	¼W
R3505	ERD25TJ102	carbon	1kΩ ±5%	¼W
R3506	ERD25TJ122	carbon	1.2kΩ ±5%	¼W
R3507	ERD25TJ102	carbon	1kΩ ±5%	¼W
R3508	ERD25TJ122	carbon	1.2kΩ ±5%	¼W
R3509	ERD25TJ122	carbon	1.2kΩ ±5%	¼W
R3510	ERD25TJ102	carbon	1kΩ ±5%	¼W
R3511	ERD25TJ102	carbon	1kΩ ±5%	¼W
R3512	ERD25TJ103	carbon	10kΩ ±5%	¼W
R3513	ERD25TJ223	carbon	22kΩ ±5%	¼W
R3514	EVND1AA00B24	variable resistor		
R3515	ERD25TJ392	carbon	3.9kΩ ±5%	¼W
R3516	ERD25TJ153	carbon	15kΩ ±5%	¼W
R3517	ERD25TJ220	carbon	22Ω ±5%	¼W
R3519	ERD25TJ103	carbon	10kΩ ±5%	¼W
R3520	ERD25TJ821	carbon	820Ω ±5%	¼W
R3522	ERD25TJ332	carbon	3.3kΩ ±5%	¼W
R3523	ERD25TJ471	carbon	470Ω ±5%	¼W
R3524	ERD25TJ683	carbon	680kΩ ±5%	¼W
R3525	ERD25TJ331	carbon	330Ω ±5%	¼W
R3526	ERDS1TJ1R0	carbon	1Ω ±5%	½W
R3532	ERD25TJ332	carbon	3.3kΩ ±5%	¼W
R3533	ERD25TJ331	carbon	330Ω ±5%	¼W
R3534	ERD25TJ750	carbon	75Ω ±5%	¼W
R3535	ERD25TJ750	carbon	75Ω ±5%	¼W
R3536	ERD25TJ750	carbon	75Ω ±5%	¼W
R3541	ERD25TJ101	carbon	100Ω ±5%	¼W
R3542	ERD25TJ101	carbon	100Ω ±5%	¼W
R3544	ERD25TJ1R0	carbon	1Ω ±5%	¼W
R3552	ERD25TJ101	carbon	100Ω ±5%	¼W
R3553	ERD25TJ105	carbon	1MΩ ±5%	¼W
R3557	ERD25TJ221	carbon	220Ω ±5%	¼W
R3558	ERD25TJ471	carbon	470Ω ±5%	¼W
R3559	ERD25TJ102	carbon	1kΩ ±5%	¼W
R3560	ERD25TJ561	carbon	560Ω ±5%	¼W
R3561	ERD25TJ392	carbon	3.9kΩ ±5%	¼W
R3562	ERD25TJ122	carbon	1.2kΩ ±5%	¼W
R3563	ERD25TJ753	carbon	75kΩ ±5%	¼W
R3564	ERD25TJ472	carbon	4.7kΩ ±5%	¼W
R3565	ERD25TJ103	carbon	10kΩ ±5%	¼W
R3566	ERD25TJ823	carbon	82kΩ ±5%	¼W
R3567	ERD25TJ472	carbon	4.7kΩ ±5%	¼W
R3568	ERD25TJ822	carbon	8.2kΩ ±5%	¼W
R3582	ERD25TJ103	carbon	10kΩ ±5%	¼W
R3584	ERD25TJ473	carbon	47kΩ ±5%	¼W
R3585	ERD25TJ473	carbon	47kΩ ±5%	¼W
R3586	ERD25TJ472	carbon	4.7kΩ ±5%	¼W
R3588	ERD25TJ224	carbon	220kΩ ±5%	¼W

CAPACITORS

C11	ECEA50Z1	electrolytic	1µf	50v
C12	ECEA1CU100	electrolytic	10µf	16v
C13	ECKC1H103JB	ceramic	10nf	50v
C14	ECEA1CU330	electrolytic	33µf	16v
C15	ECEA50ZR22	electrolytic	0.22µf	50v
C20	ECCR1H020C	ceramic	2pf	50v
C22	ECKC1H102JB	ceramic	1nf	50v
C26	ECEA1HU010	electrolytic	1µf	50v
C27	ECKC1H103JB	ceramic	10nf	50v
C28	ECKC1H103JB	ceramic	10nf	50v
C29	ECEA16Z10	electrolytic	10µf	16v
C30	ECKC1H103JB	ceramic	10nf	50v
C31	ECKC1H103JB	ceramic	10nf	50v
C32	ECKC1H103JB	ceramic	10nf	50v
C70	ECEA1HU010	electrolytic	1µf	50v
C71	ECEA1HU100	electrolytic	10µf	50v
C106	ECEA1HN010	electrolytic	1µf	50v
C108	ECCR1H010C	ceramic	1pf	50v
C110	ECKC1H103JB	ceramic	10nf	50v
C113	ECKC1H103JB	ceramic	10nf	50v
C116	ECKC1H103JB	ceramic	10nf	50v
C117	ECKC1H103JB	ceramic	10nf	50v
C121	ECCR1H560J	ceramic	56pf	50v
C124	ECKC1H103JB	ceramic	10nf	50v
C130	ECCR1H120J	ceramic	12pf	50v
C131	ECQV1H104JZ	plastic film	0.1µf	50v
C132	ECEA1CU470	electrolytic	47µf	16v
C133	ECEA50ZR47	electrolytic	0.47µf	50v
C137	ECKC1H103JB	ceramic	10nf	50v
C138	ECKC1H103JB	ceramic	10nf	50v
C142	ECCR1H390J	ceramic	39pf	50v
C143	ECEA50ZR47	electrolytic	0.47µf	50v
C144	ECCR1H270J	ceramic	27pf	50v
C145	ECKC1H103JB	ceramic	10nf	50v
C146	ECEA1CU470	electrolytic	47µf	16v
C147	ECEA1HU010	electrolytic	1µf	50v
C149	ECKC1H103JB	ceramic	10nf	50v
C150	ECKC1H103JB	ceramic	10nf	50v
C152	ECQV1H104JZ	plastic film	0.1µf	50v
C153	ECEA1CU471	electrolytic	470µf	16v

Ref No.	Part No.	Description		
C154	ECKC1H271KB	ceramic	270pf	50v
C155	ECCR1H560J	ceramic	56pf	50v
C171	ECQM1H473JZ	plastic film	47nf	50v
C172	ECCR1H330J	ceramic	33pf	50v
C175	ECQV1H105JZ	plastic film	1µf	50v
C176	ECKC1H103JB	ceramic	10nf	50v
C177	ECEA1AU220	electrolytic	22µf	10v
C179	ECQV1H474JZ	plastic film	0.47µf	50v
C184	ECEA1HU010	electrolytic	1µf	50v
C186	ECCR1H181J	ceramic	180pf	50v
C209	ECEA1CU100	electrolytic	10µf	16v
C210	ECKC1H103JB	ceramic	10nf	50v
C211	ECEA1CU100	electrolytic	10µf	16v
C212	ECCR1H680J	ceramic	68pf	50v
C212	ECKC1H103JB	ceramic	10nf	50v
C213	ECKC1H103JB	ceramic	10nf	50v
C214	ECEA1EU4R7	electrolytic	4.7µf	25v
C215	ECCR1H020C	ceramic	2pf	50v
C216	ECCR1H010C	ceramic	1pf	50v
C217	ECEA1CU222	electrolytic	2200µf	16v
C218	ECKC1H103JB	ceramic	10nf	50v
C219	ECEA1EU4R7	electrolytic	4.7µf	25v
C220	ECQV1H224JZ	plastic film	0.22µf	50v
C221	ECCR1H050C	ceramic	5pf	50v
C222	ECKC1H103JB	ceramic	10nf	50v
C225	ECQM1H332KZ	plastic film	3.3nf	50v
C226	ECQM1H273JZ	plastic film	27nf	50v
C227	ECEA1CN100	electrolytic	10µf	16v
C235	ECEA1CU471	electrolytic	470µf	16v
C236	ECEA1CU471	electrolytic	470µf	16v
C237	ECEA1HNR47	electrolytic	0.47µf	50v
C238	ECEA1CN100	electrolytic	10µf	16v
C239	ECKC1H103JB	ceramic	10nf	50v
C281	ECKC1H103JB	ceramic	10nf	50v
C282	ECKC1H103JB	ceramic	10nf	50v
C294	ECKC1H102JB	ceramic	1nf	50v
C295	ECEA1HY220	electrolytic	22µf	50v
C296	ECEA1HY220	electrolytic	22µf	50v
C297	ECKC1H103JB	ceramic	10nf	50v
C298	ECKC1H103JB	ceramic	10nf	50v
C301	ECKC1H103JB	ceramic	10nf	50v
C302	ECQM1H153JZ	plastic film	15nf	50v
C303	ECEA1EN3R3	electrolytic	3.3µf	25v
C305	ECKC1H681KB	ceramic	680pf	50v
C307	ECCR1H221J	ceramic	220pf	50v
C308	ECQV1H104JZ	plastic film	0.1µf	50v
C309	ECEA1HU100	electrolytic	10µf	50v
C311	ECEA1HUR47	electrolytic	0.47µf	50v
C312	ECQV1H334JZ	plastic film	0.33µf	50v
C313	ECQV1H334JZ	plastic film	0.33µf	50v
C314	ECQV1H334JZ	plastic film	0.33µf	50v
C323	ECCR1H470J	ceramic	47pf	50v
C327	ECCR1H820J	ceramic	82pf	50v
C328	ECKC1H103JB	ceramic	10nf	50v
C351	ECCR1H221J	ceramic	220pf	50v
C352	ECCR1H271J	ceramic	270pf	50v
C353	ECCR1H221J	ceramic	220pf	50v
C355	ECKW3D152JB	ceramic△	1.5nf	2kv
C356	ECKC2H103KB	ceramic	10nf	500v
C357	ECKC2H152KB	ceramic	1.5nf	500v
C358	ECEA1HU220	electrolytic	22µf	50v
C368	ECEA2ES010	electrolytic△	1µf	250v
C371	ECEA1EU470	electrolytic	47µf	25v
C376	ECCR1H470J	ceramic	47pf	50v
C377	ECCR1H470J	ceramic	47pf	50v
C378	ECCR1H470J	ceramic	47pf	50v
C401	ECQV1H334JZ	plastic film	0.33µf	50v
C402	ECQV1H334JZ	plastic film	0.33µf	50v
C403	ECKC1H103JB	ceramic	10nf	50v
C452	ECKC2H332KB	ceramic	3.3nf	500v
C453	ECQM1H333JZ	plastic film	33nf	50v
C455	ECEA1VU101	electrolytic	100µf	35v
C456	ECEA1VU222	electrolytic	2200µf	35v
C457	ECQV1H334JZ	plastic film	0.33µf	50v
C458	ECEA1VU332	electrolytic	3300µf	35v
C459	ECQV1H104JZ	plastic film	0.1µf	50v
C462	ECQM1H223JZ	plastic film	22nf	50v
C465	ECQV1H474JZ	plastic film	0.47µf	50v
C466	ECEA25Z4R7	electrolytic	4.7µf	25v
C501	ECQV1H104JZ	plastic film	0.1µf	50v
C502	ECQP1152GZ	plastic film	1.5nf	100v
C503	ECQV1H104JZ	plastic film	0.1µf	50v
C504	ECEA1CU102	electrolytic	1000µf	16v
C505	ECKC1H101KB	ceramic	100pf	50v
C506	ECEA1HU220	electrolytic	22µf	50v
C507	ECEA1HU010	electrolytic	1µf	50v
C510	ECKC1H472KB	ceramic	4.7nf	50v
C515	ECQM1H122JZ	plastic film	1.2nf	50v
C517	ECQV1H154JZ	plastic film	0.15µf	50v
C518	ECEA1CU100	electrolytic	10µf	16v
C519	ECEA1CU330	electrolytic	33µf	16v
C520	ECEA1VU4R7	electrolytic	4.7µf	35v
C522	ECEA1CN100	electrolytic	10µf	16v
C525	ECEA1CU470	electrolytic	47µf	16v
C531	ECQM1103KZ	plastic film	10nf	100v
C541	ECEA1HU2R2	electrolytic	2.2µf	50v
C542	ECEA1JU100	electrolytic	10µf	63v
C543	ECEA1CU100	electrolytic	10µf	16v
C551	ECEA2VS010	electrolytic	1µf	350v
C552	ECWF2H824JZ	ceramic	0.82µf	500v
C553	ECEA2CS4R7	electrolytic	4.7µf	160v
C554	ECEA2ES100	electrolytic△	10µf	250v
C555	ECKC2H471KB	ceramic	470pf	500v
C556	ECKC3F122JB	ceramic	1.2nf	3kv
C558	ECWH12H822J	ceramic	0.1µf	1.2kv
C560	ECWF2H334JZ	ceramic	0.33µf	500v
C561	ECKC3D561JB	ceramic	560pf	2kv

Ref No.	Part No.	Description		
C566	ECKC2H471KB	ceramic	470pf	500v
C576	ECEA1CU471	electrolytic	470µf	16v
C602	ECQM1H223JZ	plastic film	22nf	50v
C603	ECQM1H223JZ	plastic film	22nf	50v
C604	ECQM1H223JZ	plastic film	22nf	50v
C606	ECCR1H680J	ceramic	68pf	50v
C607	ECEA1HU010	electrolytic	1µf	50v
C608	ECCR1H121J	ceramic	120pf	50v
C609	ECCR1H220J	ceramic	22pf	50v
C610	ECCR1H220J	ceramic	22pf	50v
C611	ECCR1H221J	ceramic	220pf	50v
C612	ECKC1H103JB	ceramic	10nf	50v
C613	ECKC1H103JB	ceramic	10nf	50v
C615	ECQV1H334JZ	plastic film	0.33µf	50v
C617	ECCR1H680J	ceramic	68pf	50v
C618	ECCR1H221J	ceramic	220pf	50v
C619	ECCR1H121J	ceramic	120pf	50v
C620	ECKC1H222KB	ceramic	2.2nf	50v
C621	ECQM1H473JZ	plastic film	47nf	50v
C622	ECQV1H334JZ	plastic film	0.33µf	50v
C623	ECQV1H334JZ	plastic film	0.33µf	50v
C624	ECQV1H334JZ	plastic film	0.33µf	50v
C626	ECKC1H103JB	ceramic	10nf	50v
C627	ECEA1CU221	electrolytic	220µf	16v
C629	ECQM1H223JZ	plastic film	22nf	50v
C630	ECKC1H102JB	ceramic	1nf	50v
C631	ECCR1H680J	ceramic	68pf	50v
C632	ECCR1H121J	ceramic	120pf	50v
C634	ECCR1H391J	ceramic	390pf	50v
C635	ECKC1H472KB	ceramic	4.7nf	50v
C636	ECKC1H472KB	ceramic	4.7nf	50v
C637	ECRHA030E11	trimmer		
C638	ECEA1HU010	electrolytic	1µf	50v
C639	ECQM1H223JZ	plastic film	22nf	50v
C642	ECKC1H103JB	ceramic	10nf	50v
C651	ECEA1HUR33	electrolytic	0.33µf	50v
C652	ECEA1HUR33	electrolytic	0.33µf	50v
C653	ECCR1H101J	ceramic	100pf	50v
C654	ECCR1H101J	ceramic	100pf	50v
C655	ECKC1H331JB	ceramic	330pf	50v
C656	ECKC1H471KB	ceramic	470pf	50v
C657	ECQM1H223JZ	plastic film	22nf	50v
C658	ECQM1H223JZ	plastic film	22nf	50v
C659	ECKC1H471KB	ceramic	470pf	50v
C661	ECEA1CN220	electrolytic	22µf	16v
C662	ECKC1H332KB	ceramic	3.3nf	50v
C663	ECEA1EU470	electrolytic	47µf	25v
C664	ECKC1H101KB	ceramic	100pf	50v
C665	ECKC1H101KB	ceramic	100pf	50v
C751	ECQV1H104JZ	plastic film	0.1µf	50v
C752	ECQV1H104JZ	plastic film	0.1µf	50v
C753	ECQM10223JZ	plastic film	22nf	1kv
C754	ECCR1H181J	ceramic	180pf	50v
C755	ECEA1VU470	electrolytic	47µf	35v
C756	ECEA1EU221	electrolytic	220µf	25v
C758	ECQM1225KN	plastic film	2.2µf	100v
C760	ECQV1H474JZ	plastic film	0.47µf	50v
C801	ECQM2A334MW	plastic film	33nf	100v
C803	ECKC2H472KB	ceramic	4.7pf	500v
C804	ECKC2H472KB	ceramic	4.7pf	500v
C805	ECKC2H472KB	ceramic	4.7pf	500v
C806	ECKC2H472KB	ceramic	4.7pf	500v
C807	ECES2GU221	electrolytic	220µf	400v
C808	ECEA50Z10	electrolytic	10µf	50v
C809	ECQV1H154JZ	plastic film	0.15µf	50v
C810	ECKC2H103KB	ceramic	10nf	500v
C811	ECKC3A821KB	ceramic	820pf	1kv
C812	ECKC3A471KB	ceramic	470pf	1kv
C813	ECKCNS222KB	ceramic	22nf	v
C815	ECKC2H471KB	ceramic	470pf	500v
C816	ECQM6473KZ	plastic film	47nf	600v
C817	ECKC1H471KB	ceramic	470pf	50v
C820	ECKC3A102KB	ceramic	1nf	1kv
C851	ECKC3A152KB	ceramic	1.5nf	1kv
C852	ECKC2H681KB	ceramic	680pf	500v
C853	ECKC2H561KB	ceramic	560pf	500v
C854	ECEA2ES101	electrolytic	100µf	250v
C855	ECEA1VU101	electrolytic	100µf	35v
C856	ECEA1VU471	electrolytic	470µf	35v
C857	ECKC2H471KB	ceramic	470pf	500v
C858	ECEA1EU102	electrolytic	1000µf	25v
C859	ECEA1EU100	electrolytic	10µf	25v
C860	ECKC1H103JB	ceramic	10nf	50v
C861	ECEA1CU101	electrolytic	100µf	16v
C1101	ECEA1CU100	electrolytic	10µf	16v
C1102	ECEA1CU100	electrolytic	10µf	16v
C1103	ECEA1CU100	electrolytic	10µf	16v
C1104	ECQM1H392JC	plastic film	3.9nf	50v
C1105	ECQM1H333JZ	plastic film	33nf	50v
C1106	ECQP1392JZ	plastic film	3.9nf	100v
C1107	ECEA0JU101	electrolytic	100µf	6.3v
C1201	ECKC1H103JB	ceramic	10nf	50v
C1202	ECQM1H272JZ	plastic film	2.7nf	50v
C1203	ECEA0JU101	electrolytic	100µf	6.3v
C1204	ECQM1H333JZ	plastic film	33nf	50v
C1205	ECQV1H104JZ	plastic film	0.1µf	50v
C1206	ECEA1CU102	electrolytic	1000µf	16v
C1207	ECCR1H150J	ceramic	15pf	50v
C1208	ECCR1H270J	ceramic	27pf	50v
C1211	ECKC1H103JB	ceramic	10nf	50v
C1214	ECEA0JU221	electrolytic	220µf	6.3v
C1219	ECEA0JU220B	electrolytic	22µf	6.3v
C1221	ECKC1H103JB	ceramic	10nf	50v
C1222	ECEA1HU010	electrolytic	1µf	50v
C1223	ECQM1H563JZ	plastic film	56nf	50v
C1227	ECQV1H104JZ	plastic film	0.1µf	50v
C2102	ECKC1H103JB	ceramic	10nf	50v

Ref No.	Part No.	Description		
C2127	ECCR1H470J	ceramic	47pf	50v
C2128	ECKC1H103JB	ceramic	10nf	50v
C2129	ECEA1CU330	electrolytic	33µf	16v
C2134	ECKC1H103JB	ceramic	10nf	50v
C2158	ECKC1H103JB	ceramic	10nf	50v
C2161	ECEA1CU100	electrolytic	10µf	16v
C2170	ECKC1H103JB	ceramic	10nf	50v
C2201	ECQM1H102KZ	plastic film	1nf	50v
C2202	ECQM1H822JZ	plastic film	8.2nf	50v
C2203	ECQM1H273JZ	plastic film	27nf	50v
C2204	ECQM1H102KZ	plastic film	1nf	50v
C2205	ECEA1CU100	electrolytic	10µf	16v
C2206	ECEA50ZR47	electrolytic	0.47µf	50v
C2207	ECQV1H224JZ	plastic film	0.22µf	50v
C2208	ECQV1H104JZ	plastic film	0.1µf	50v
C2209	ECQV1H224JZ	plastic film	0.22µf	50v
C2210	ECQV1H224JZ	plastic film	0.22µf	50v
C2211	ECQV1H104JZ	plastic film	0.1µf	50v
C2213	ECEA1CU101	electrolytic	100µf	16v
C2216	ECEA1EN4R7	electrolytic	4.7µf	25v
C2217	ECEA1EN4R7	electrolytic	4.7µf	25v
C2218	ECQM1H473JZ	plastic film	47nf	50v
C2219	ECEA1CN470	electrolytic	47µf	16v
C2220	ECQV1H474JZ	plastic film	0.47µf	50v
C2221	ECQP1562JZ	plastic film	5.6nf	100v
C2222	ECQM1H223JZ	plastic film	22nf	50v
C2223	ECEA1CU101	electrolytic	100µf	16v
C2224	ECCR1H120J	ceramic	12pf	50v
C2225	ECQM1H102KZ	plastic film	1nf	50v
C2226	ECQV1H104JZ	plastic film	0.1µf	50v
C2227	ECEA1CN470	electrolytic	47µf	16v
C2232	ECEA1CN470	electrolytic	47µf	16v
C2237	ECKC1H103JB	ceramic	10nf	50v
C2238	ECEA1HU010	electrolytic	1µf	50v
C2239	ECKC1H103JB	ceramic	10nf	50v
C2240	ECEA1HU010	electrolytic	1µf	50v
C2241	ECEA1HN010	electrolytic	1µf	50v
C2242	ECEA1HN010	electrolytic	1µf	50v
C2243	ECEA1HU4R7	electrolytic	4.7µf	50v
C2246	ECEA1CN470	electrolytic	47µf	16v
C2247	ECEA1CU101	electrolytic	100µf	16v
C2248	ECEA1CU101	electrolytic	100µf	16v
C2252	ECKC1H103JB	ceramic	10nf	50v
C2303	ECEA1CU101	electrolytic	100µf	16v
C2304	ECEA1EN4R7	electrolytic	4.7µf	25v
C2305	ECQM1H392JC	plastic film	3.9nf	50v
C2306	ECEA1CU470	electrolytic	47µf	16v
C2307	ECEA1EN4R7	electrolytic	4.7µf	25v
C2308	ECQM1H103KZ	plastic film	10nf	50v
C2309	ECQM1H223JZ	plastic film	22nf	50v
C2310	ECQM1H103KZ	plastic film	10nf	50v
C2311	ECEA1CU471	electrolytic	470µf	16v
C2321	ECQM1H392JC	plastic film	3.9nf	50v
C2322	ECEA1CN100	electrolytic	10µf	16v
C2326	ECQM1H123JZ	plastic film	12nf	50v
C2327	ECQM1H103KZ	plastic film	10nf	50v
C2328	ECEA1CN100	electrolytic	10µf	16v
C2351	ECQM1H183JZ	plastic film	18nf	50v
C2352	ECQM1H183JZ	plastic film	18nf	50v
C2353	ECEA1HNR47	electrolytic	0.47µf	50v
C2354	ECEA1HNR47	electrolytic	0.47µf	50v
C2355	ECEA1EU221	electrolytic	220µf	25v
C2356	ECEA1EU221	electrolytic	220µf	25v
C2357	ECEA1VU470	electrolytic	47µf	35v
C2358	ECEA1VU470	electrolytic	47µf	35v
C2359	ECQV1H104JZ	plastic film	0.1µf	50v
C2360	ECQV1H104JZ	plastic film	0.1µf	50v
C2361	ECEA1HU102	electrolytic	1000µf	50v
C2362	ECEA1HU102	electrolytic	1000µf	50v
C2363	ECEA1HU010	electrolytic	1µf	50v
C2364	ECEA1CU100	electrolytic	10µf	16v
C2365	ECEA1HU101	electrolytic	100µf	50v
C2366	ECQM1H823JZ	plastic film	82nf	50v
C2367	ECQM1H823JZ	plastic film	82nf	50v
C2368	ECES1HU472	electrolytic	4700µf	50v
C2369	ECEA1HU102	electrolytic	1000µf	50v
C2370	ECQM1H273JZ	plastic film	27nf	50v
C2371	ECQM1H273JZ	plastic film	27nf	50v
C2372	ECQM1H472JZ	plastic film	4.7nf	50v
C2373	ECQM1H472JZ	plastic film	4.7nf	50v
C2401	ECEA1CU102	electrolytic	1000µf	16v
C2402	ECQV1H104JZ	plastic film	0.1µf	50v
C2403	ECKC1H103JB	ceramic	10nf	50v
C2404	ECEA1EU330	electrolytic	33µf	25v
C2601	ECKC1H103JB	ceramic	10nf	50v
C2602	ECEA1EN4R7	electrolytic	4.7µf	25v
C2603	ECEA1CN100	electrolytic	10µf	16v
C2604	ECEA1HN010	electrolytic	1µf	50v
C2605	ECEA1HN010	electrolytic	1µf	50v
C2606	ECEA1CU471	electrolytic	470µf	16v
C2607	ECEA1CU100	electrolytic	10µf	16v
C2608	ECQV1H104JZ	plastic film	0.1µf	50v
C2609	ECEA1EN4R7	electrolytic	4.7µf	25v
C2610	ECEA1CU470	electrolytic	47µf	16v
C2611	ECEA1CU470	electrolytic	47µf	16v
C2612	ECEA1CN100	electrolytic	10µf	16v
C2613	ECEA1CU471	electrolytic	470µf	16v
C2614	ECCR1H680J5	ceramic	68pf	50v
C2619	ECKC1H561KB	ceramic	560pf	50v
C2628	ECEA1CU100	electrolytic	10µf	16v
C2629	ECEA1CN220	electrolytic	22µf	16v
C2701	ECEA1CU330	electrolytic	33µf	16v
C2702	ECQM1H103KZ	plastic film	10nf	50v
C2703	ECQM1H392JC	plastic film	3.9nf	50v
C2704	ECEA1CU331	electrolytic	330µf	16v
C2705	ECEA1HU010	electrolytic	1µf	50v
C2706	ECQP1562JZ	plastic film	5.6nf	100v

Ref No.	Part No.	Description		
C2707	ECQM1H272JZ	plastic film	2.7nf	50v
C2708	ECEA1HU3R3	electrolytic	3.3µf	50v
C2710	ECKC1H103JB	ceramic	10nf	50v
C2711	ECEA1CU101	electrolytic	100µf	16v
C2712	ECEA1CU471	electrolytic	470µf	16v
C2713	ECEA1CU100	electrolytic	10µf	16v
C2714	ECEA1CU100	electrolytic	10µf	16v
C2715	ECEA1HN010	electrolytic	1µf	50v
C2716	ECEA1HN010	electrolytic	1µf	50v
C2717	ECEA1CU100	electrolytic	10µf	16v
C2718	ECEA1HN010	electrolytic	1µf	50v
C2719	ECEA1HN010	electrolytic	1µf	50v
C2726	ECEA1HN010	electrolytic	1µf	50v
C2727	ECEA1HN010	electrolytic	1µf	50v
C2728	ECEA1CN100	electrolytic	10µf	16v
C2729	ECEA1CN100	electrolytic	10µf	16v
C2730	ECEA1CU100	electrolytic	10µf	16v
C2731	ECQV1H104JZ	plastic film	0.1µf	50v
C2732	ECEA1CU221	electrolytic	220µf	16v
C2733	ECEA1CN100	electrolytic	10µf	16v
C2736	ECQM1H103KZ	plastic film	10nf	50v
C2737	ECEA1CU100	electrolytic	10µf	16v
C2741	ECCR1H101J	ceramic	100pf	50v
C2742	ECCR1H101J	ceramic	100pf	50v
C2744	ECEA1CU470	electrolytic	47µf	16v
C2749	ECKC1H151KB	ceramic	150pf	50v
C2750	ECQM1H223JZ	plastic film	22nf	50v
C2751	ECEA1CU220	electrolytic	22µf	16v
C2752	ECEA1EN4R7	electrolytic	4.7µf	25v
C2753	ECEA1CN100	electrolytic	10µf	16v
C2754	ECEA1HN2R2	electrolytic	2.2µf	50v
C2755	ECEA1CN100	electrolytic	10µf	16v
C2756	ECEA1CN100	electrolytic	10µf	16v
C3502	ECCR1H150J	ceramic	15pf	50v
C3503	ECKC1H102JB	ceramic	1nf	50v
C3504	ECKC1H471KB	ceramic	470pf	50v
C3505	ECQM1H223JZ	plastic film	22nf	50v
C3506	ECKC1H271KB	ceramic	270pf	50v
C3507	ECCR1H101J	ceramic	100pf	50v
C3508	ECCR1H150J	ceramic	15pf	50v
C3509	ECCR1H270J	ceramic	27pf	50v
C3510	ECQM1H683KZ	plastic film	68nf	50v
C3511	ECCR1H221J	ceramic	220pf	50v
C3512	ECQM1H473JZ	plastic film	47nf	50v
C3513	ECEA1CU100	electrolytic	10µf	16v
C3515	ECQM1H473JZ	plastic film	47nf	50v
C3516	ECQV1H224JZ	plastic film	0.22µf	50v
C3517	ECKC1H103JB	ceramic	10nf	50v
C3521	ECQV1H104JZ	plastic film	0.1µf	50v
C3522	ECEA1HU2R2	electrolytic	2.2µf	50v
C3523	ECEA0JU101	electrolytic	100µf	6.3v
C3524	ECEA0JU222	electrolytic	2200µf	6.3v
C3525	ECEA1CU470	electrolytic	47µf	16v
C3526	ECKC1H103JB	ceramic	10nf	50v
C3527	ECCR1H180J	ceramic	18pf	50v
C3528	ECRHA020E11	trimmer		
C3532	ECKC1H103JB	ceramic	10nf	50v
C3533	ECQM1H223JZ	plastic film	22nf	50v
C3534	ECEA1CU220	electrolytic	22µf	16v
C3536	ECKC1H103JB	ceramic	10nf	50v
C3544	ECCR1H150J	ceramic	15pf	50v
C3545	ECCR1H270J	ceramic	27pf	50v
C3546	ECKC1H103JB	ceramic	10nf	50v
C3548	ECEA0JU101	electrolytic	100µf	6.3v
C3550	ECEA1HN010	electrolytic	1µf	50v
C3552	ECKC1H103JB	ceramic	10nf	50v
C3553	ECEA1CU221	electrolytic	220µf	16v
C3554	ECCR1H100C	ceramic	10pf	50v
C3555	ECEA1CN330	electrolytic	33µf	16v
C3556	ECCR1H100C	ceramic	10pf	50v
C3558	ECRBA160N11	trimmer		
C3559	ECCR1H560J	ceramic	56pf	50v
C3561	ECEA1HU010	electrolytic	1µf	50v
C3565	ECCR1H070C	ceramic	7pf	50v
C3566	ECKC1H821KB	ceramic	820pf	50v
C3567	ECKC1H821KB	ceramic	820pf	50v
C3568	ECKC1H821KB	ceramic	820pf	50v
C3570	ECEA0JU471B	electrolytic	470µf	6.3v
C3571	ECEA1HU010	electrolytic	1µf	50v

COILS

LC601	TLK153162E	coil
L12	TLT082L991R	coil
L16	TLT082L991R	coil
L17	TLT082L991R	coil
L18	TLT082L991R	coil
L21	TLT047K991R	coil
L25	TLTABTR22M	coil
L101	TLT022K991R	coil
L110	TLI157754X	coil
L121	TLT100J991R	coil
L122	TLT047K991R	coil
L123	TLQ047K236B	coil
L124	TLT100J991R	
L130	TLT220K991R	coil
L131	TLT680K991R	coil
L133	TLT150K991R	coil
L135	EIV7EN055B	coil
L136	EIV7EN054B	coil
L137	TLT180K991R	coil
L171	TLT082L991R	coil
L174	TLTR33L991R	coil
L175	TSC937	bead choke
L176	TSC937	bead choke
L210	TLT047K991R	coil
L211	EIV7ES009B	coil

Ref No.	Part No.	Description
L214	TLT680K991R	coil
L215	EIS7ES006B	coil
L238	TLS159054E	coil
L239	TLS159054E	coil
L251	TLS159054E	coil
L252	TLS159054E	coil
L253	TLS159054E	coil
L254	TLS159054E	coil
L281	TLS159054E	coil
L282	TLS159054E	coil
L283	TLS159054E	coil
L284	TLS159054E	coil
L301	TLX390J166C	coil
L303	TLT100K991R	coil
L351	TLT181K991R	coil
L352	TLT181K991R	coil
L353	TLT181K991R	coil
L354	TLT047L991R	coil
L355	TSC937	bead choke
L356	TSC937	bead choke
L357	TSC937	bead choke
L451	TLT082L991R	coil
L552	ELC07B013	coil
L553	ELH5L403	coil
L554	ELC15B004	coil
L555	TSC937	bead choke
L602	TLT100J991R	coil
L603	TLK158066	coil
L605	EIK7EG013B	coil
L606	EIK7EG013B	coil
L607	EIK7EG012B	coil
L609	EIK7EG011B	coil
L752	ELC10B008	coil
L801	ELF18D650L	delay line
L802	ELF18D650L	delay line
L803	TSC925-4	coil
L804	TSC925-4	coil
L806	TSC925-4	coil
L808	TLT101K991R	coil
L809	TLQ047K236B	coil
L852	TSC937	bead choke
L853	TLQ039K126Y	coil
L855	TSC925-4	coil
L1101	TLT542K991K	coil
L1102	EIR7QG001B	coil
L1205	TLT047L991R	coil
L2201	EIR7QG017B	coil
L2202	TLT102K991R	coil
L2203	EIS7EG015B	coil
L2301	TLT100L991R	coil
L3501	TLT150K991R	coil
L3502	TLT100L991R	coil
L3503	TLT047L991R	coil

TRANSFORMERS

T101	EIV7EN078B	coil
T531	ETH19Y53AY	transformer
T551	TLF15505F	transformer △
T801	ETS49K409A	transformer
T1201	ETP35KE65E	transformer

DIODES

D105	MA165TA5	diode
D132	TVSQB109SA	diode
D171	MA4082HTA	diode
D174	MA165TA5	diode
D177	MA150TA	diode
D179	MA4047HTA	diode
D181	MA4082HTA	diode
D182	MA4082HTA	diode
D201	MA165TA5	diode
D202	MA165TA5	diode
D203	MA165TA5	diode
D204	MA165TA5	diode
D205	MA165TA5	diode
D206	MA165TA5	diode
D235	MA27TA5	diode
D303	MA165TA5	diode
D304	MA165TA5	diode
D305	MA4130TA	diode
D306	MA4130TA	diode
D307	MA4130TA	diode
D313	MA27TA5	diode
D314	MA4030HTA	diode
D319	MA165TA5	diode
D320	MA165TA5	diode
D321	MA165TA5	diode
D326	MA858TA5	diode
D328	MA4056MTA	diode
D329	MA1033MTA	diode
D330	MA858TA5	diode
D403	MA27TA5	diode
D451	ERA15-02V3	diode
D452	MA165TA5	diode
D453	MA165TA5	diode
D501	ERA15-02V3	diode
D505	MA165TA5	diode
D508	MA4051MTA	diode
D510	MA165TA5	diode
D511	MA4051MTA	diode
D541	MA4360MTA	diode
D551	ERA22-02V3	diode
D552	MA167TA5	diode
D554	ERA22-02V3	diode
D603	MA4056MTA	diode

Ref No.	Part No.	Description
D604	MA858TA5	diode
D751	MA165TA5	diode
D753	TVSC2715M	diode
D754	TVSRU2AM	diode
D755	MA4200MTA	diode
D801	D4SB80Z	diode
D804	ERZC10DK621	diode
D805	232266296009	diode
D807	ERA22-04V3	diode
D809	ERA22-02V3	diode
D810	ERA22-08V3	diode
D811	ON3105.TV	transistor
D851	TVSC2408M	diode
D852	EU02	diode
D853	ERD32-02L7	diode
D854	TVSSR2KL	diode
D855	ERD32-02L7	diode
D1101	PH302B	diode
D1206	MA165TA5	diode
D1208	TVSS1WBS10	diode
D1217	MA165TA5	diode
D1220	MA165TA5	diode
D1221	MA4082HTA	diode
D1225	MA4082HTA	diode
D1228	MA4082HTA	diode
D1229	MA4082HTA	diode
D1251	LN81RPHL	diode
D1253	LN524GA-L	L.E.D.
D1255	LN053219P2	L.E.D.
D1267	MA4082HTA	diode
D1268	MA4082HTA	diode
D2162	MA4051MTA	diode
D2201	MA700TA5	diode
D2202	MA165TA5	diode
D2203	MA165TA5	diode
D2204	MA700TA5	diode
D2205	MA700TA5	diode
D2207	MA165TA5	diode
D2209	MA165TA5	diode
D2211	MA165TA5	diode
D2215	MA700TA5	diode
D2216	MA700TA5	diode
D2303	MA165TA5	diode
D2304	MA165TA5	diode
D2351	TVSRD13FB	diode
D2603	MA165TA5	diode
D2605	MA165TA5	diode
D2607	MA165TA5	diode
D2610	MA150TA	diode
D2612	MA165TA5	diode
D2614	MA165TA5	diode
D2615	MA700TA5	diode
D2628	MA858TA5	diode
D2629	MA165TA5	diode
D2708	MA165TA5	diode
D2710	MA858TA5	diode
D3502	MA165TA5	diode
D3503	MA165TA5	diode
D3504	MA165TA5	diode
D3505	MA165TA5	diode
D3516	MA165TA5	diode
D3517	MA165TA5	diode
D3526	MA165TA5	diode
D3527	MA4082HTA	diode
D3528	MA165TA5	diode
D3529	MA165TA5	diode
D3530	MA165TA5	diode

TRANSISTORS

Q21	2SC2636-T	transistor
Q130	2SA564-S	transistor
Q201	UN4111TA	transistor
Q202	UN4211TA	transistor
Q210	2SC1047-BCD	transistor
Q211	2SC1685-TA	transistor
Q235	2SC1383-S	transistor
Q236	2SA683-RS	transistor
Q237	2SC1685-TA	transistor
Q303	2SC2636-T	transistor
Q304	2SC1685-TA	transistor
Q306	UN4211TA	transistor
Q351	2SC2923-RL	transistor
Q352	2SC2923-RL	transistor
Q353	2SC2923-RL	transistor
Q365	2SC1685-TA	transistor
Q366	2SC1685-TA	transistor
Q367	2SC1685-TA	transistor
Q401	2SC1685-TA	transistor
Q501	2SD836-AL	transistor
Q502	2SC1685-TA	transistor
Q503	2SC1685-TA	transistor
Q504	UN4213TA	transistor
Q541	2SA564-S	transistor
Q542	2SC1685-TA	transistor
Q551	2SD1441-RL	transistor
Q601	2SC1685-TA	transistor

Ref No.	Part No.	Description
Q602	2SC1685-TA	transistor
Q654	UN4213TA	transistor
Q751	2SC1685-TA	transistor
Q752	2SA564-S	transistor
Q753	2SD762-P	transistor
Q801	2SD965-R	transistor
Q802	2SD965-R	transistor
Q1205	UN4216TA	transistor
Q1207	UN4213TA	transistor
Q1208	2SC1685-TA	transistor
Q1209	2SC1685-TA	transistor
Q1210	UN4215TA	transistor
Q1211	UN4215TA	transistor
Q1220	DTA143EF	transformer
Q1225	UN4210TA	transistor
Q1227	UN4112TA	transistor
Q1230	UN4215TA	transistor
Q1232	2SA564-S	transistor
Q2101	BF370	transistor
Q2152	UN4212TA	transistor
Q2160	UN4213TA	transistor
Q2201	2SC1685-TA	transistor
Q2207	UN4212TA	transistor
Q2210	UN4211TA	transistor
Q2211	2SD1469-M	transistor
Q2212	2SA564-S	transistor
Q2305	UN4211TA	transistor
Q2601	2SD637-RS	transistor
Q2602	2SD637-RS	transistor
Q2604	2SA564-S	transistor
Q2605	2SD637-RS	transistor
Q2606	UN4211TA	transistor
Q2608	UN4213TA	transistor
Q2702	2SC1685-TA	transistor
Q2706	UN4212TA	transistor
Q2707	UN4212TA	transistor
Q2708	UN4112TA	transistor
Q2709	UN4212TA	transistor
Q2710	UN4212TA	transistor
Q2713	2SC1685-TA	transistor
Q2714	UN4212TA	transistor
Q2715	2SC1685-TA	transistor
Q2716	2SC1685-TA	transistor
Q2724	2SC1685-TA	transistor
Q2725	2SC1685-TA	transistor
Q2726	2SC1685-TA	transistor
Q2727	2SC2636-T	transistor
Q3501	2SC1685-TA	transistor
Q3502	2SC1685-TA	transistor
Q3503	2SC1685-TA	transistor
Q3504	2SC1685-TA	transistor
Q3505	2SC1685-TA	transistor
Q3506	2SC1685-TA	transistor
Q3513	2SC1685-TA	transistor
Q3514	2SA564-S	transistor
Q3515	2SC1685-TA	transistor
Q3516	2SA564-S	transistor
Q3522	2SA564-S	transistor
Q3523	UN4213TA	transistor
Q3524	2SA564-S	transistor

I.C's

IC101	M51366SP	I.C.
IC1101	UPC1474HA	I.C.
IC1202	PCD8582	I.C.
IC1203	MAB8461PW134	I.C.
IC1204	L78M05MRB	I.C.
IC1205	SAA1061	I.C.
IC171	SAB3035	I.C.
IC201	AN5836	I.C.
IC2102	AN5215	I.C.
IC2170	TC4011BP	I.C.
IC2201	TDA3803A	I.C.
IC2270	UPD4066BC	I.C.
IC2271	L78M12MRB	I.C.
IC2272	TC4023BP	I.C.
IC2302	TDA3810	I.C.
IC2351	STK4412	I.C.
IC2401	L78M12MRB	I.C.
IC2601	M51326P	I.C.
IC2701	M51321P	I.C.
IC2702	AN5421	I.C.
IC2703	UPD4066BC	I.C.
IC3501	SAA5231	I.C.
IC3502	SAA5243P-E	I.C.
IC3505	L78M05MRB	I.C.
IC3506	M5M5165P-12L	I.C.
IC3507	MAB8461PW135	I.C.
IC451	TDA3654	I.C.
IC501	TDA2579	I.C.
IC601	TDA4555	I.C.
IC602	TDA3505	I.C.
IC651	TDA4565	I.C.
IC70	UPC574J	I.C.
IC801	STR54041-M	I.C.
IC851	L78M12MRB	I.C.

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